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TO IMPROVE THE SOIL AND THE MIND.

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Editorial Correspondence.

The Agriculture of Chester County, Pennsylvania---I.

PHILADELPHIA, June 17, 1861.

For its excellent grazing lands, its tidy farming, and its commodious barns, Chester county in Pennsylvania, has long enjoyed a wide reputation. During the past week I have had the opportunity of carrying out a long cherished desire to see upon what grounds this reputation is based; and to the invitation of J. LACEY DARLINGTON, Esq., Secretary of the County Agricultural Society, and the kind attentions of himself and D. B. HINMAN, Esq., its President, I am indebted for a delightful visit, the notes of which are now submitted in part, to the readers of the COUNTRY GENTLEMAN.

Chester county lies in the form of an irregular pentagon, with the Schuylkill river and Montgomery county upon its northeastern line, Berks upon the northwest, Lancaster on the west, Maryland on the south, and Delaware State and Delaware county on the southeast. The surface is very well entitled to the appellation of a "rolling country;" for, without being sufficiently broken to render it, except in rare instances, too acclivitous for cultivation, it has nothing like plains or prairies within its bounds, and it varies several hundred feet in elevation from point to point, without containing anything like a mountain, and so gently that the highest summits sometimes seem scarcely entitled to the name of hills in the ordinarily precipitous acceptance of the word. These summits, nevertheless, command grand views of the surrounding vales; while they are often, if not perhaps as a general thing, equally as fertile as the lower lands—the exceptions to this rule being rendered such by differences in the geological formation beneath them. The valleys are as winding and varied in form as the undulating heights that overlook them, with the exception of the "Great Valley," as it has been called *par excellence*, or "Chester Valley" in more modern parlance, which runs nearly east and west all the way across the county; bounded on the south by a range of hills, underlaid with a slate formation, constituting probably the least valuable farming lands in the county; having, beneath the course of the valley itself that extensive deposit of lime-stone which has done so much to advance the agriculture of this whole region; and, stretching away upon the north, another range of highland, similar in geological character to the largest part of the country around—that is, resting upon gneiss and mica slate. Beside the long and narrow limestone region in the great valley, there are only a few scattered points at which this rock occurs; and when we add to what has been said above, the fact that a green serpentine here and there appears in spurs to the south of the slate range, and that a red shale is found just along the

Schuylkill, we shall have a tolerably complete idea of the geology of Chester. The soil is generally a rather stiff, sometimes quite a clayey loam; the subsoil almost universally clay, and while there are fields now and then which contain so many stones as to require a good deal of picking, and supply considerable stone wall, little of the land would be thought really *stony* by one who has seen those New-England districts, in which it seems as though the more that are taken off, *the more there are left behind* to impede the plow share and the hoe.

Having a surface thus varied, Nature has in great measure taken care of the *drainage* of the land. With the exception of occasional springy spots, where the out-fall is obstructed, artificial drainage has not therefore been largely introduced, and there are perhaps as few or fewer waste and marshy lands here as in any district of equal extent in the country. What wet places do exist, are generally confined to a few acres, and on the best farms have frequently been already reclaimed by the construction of stone underdrains.

But Nature has done more than merely look after the general drainage of the soil. She has provided springs of the purest and softest water, from which almost every farm not only supplies its fields and buildings, but also in numerous instances propels its machinery, or at least carries this agent of cleanliness and comfort into every part of the farmer's dwelling. I doubt if there is any other district in which water runs for this latter purpose are so commonly in use, while some prefer a water-wheel and pump as a more permanent and substantial fixture. The spring-houses on the dairy farms facilitate the making of the best butter in warm weather; and such springs, with the clear trout streams which here as elsewhere accompany them, can scarcely be over-rated in estimating the agricultural resources of a country.

Through the heart of Chester county run to the southward the two main "branches," which unite, some miles after crossing the Great Valley, to form the Brandywine, the banks of which river are quite high and precipitous at several points, but more commonly resemble what our western friends style "bluffs,"—while its flats, nowhere very wide, are even more famous for their pasturage than any other grazing lands around. It was on some of these meadows, I believe, that the late JAMES PEDDER once said he could almost accept the punishment of Nebuchadnezzar with a cheerful heart. The cattle at least enjoy being turned out to grass upon them, however it might be with man.

To render the picture of Chester county and its agriculture more complete, I should add that probably twelve or fifteen per cent. of its lands are under wood. As this is scattered about, in wood-lots upon every farm, the views from prominent elevations always include shade enough to render the landscape a peculiarly charming one; but it has been an article in the creed of most Chester farmers, that no trees are wanted in the fields themselves. The most common style of fencing is with rails, either laid in worm-fence fashion, or what is very common, inserted in morticed posts—the latter making a neat and serviceable enclosure, except that the posts will rot off about once in every fifteen years. There is a good deal also of stone-wall, but in a latitude where the winter season is a constant succession of freezings and thawings, there seems to be somewhat more difficulty than there is with us in preventing tumble-downs from action of frost. Hedges of the Virginia thorn are found to some extent, but are not nearly so common here as in the neighborhood of Wil-

mington, Del., where I remember having much admired their beauty several years ago.

The Agriculture of Chester County is exclusively of a grazing and dairying kind, including only about a sufficient extent of wheat land for the bread of those who cultivate it; enough oats, straw and hay for the farm and village horses, and enough of the two latter and Indian corn for the cattle and sheep which make the butter or are fattened for the Philadelphia butchers. It cannot be called a *breeding* country either, for most of the live stock comes from the western part of the State, from Ohio, and sometimes even from still farther to the westward, to be fed or grazed here for from six months to a year before it is finally marketed. But there is, nevertheless, considerable valuable stock bred both for beef or mutton, and for butter purposes; I was scarcely prepared to find the Alderney cattle, for example, so considerably diffused and so much in favor,—while the fact above alluded to, together with the skill exercised by the Chester farmers in the selection of their store cattle, deeply tinged with the Short-Horn blood of the West, renders the stock of the country superior as a whole, I think, to that of any district of equal area I have ever so closely examined. As to the swine, I need scarcely add that where the "Chester County" pigs are so commonly found, there must be a deal of fat pork cheaply made; all farmers do not have, by any means, what can strictly be called by this name, but the average character of the swine one sees, appears to be very good; and, where so much butter is manufactured, there must of course be many a populous sty to consume the buttermilk to advantage.

The great beauty of Chester County farming is its *neatness*. As we drive through the roads or walk from field to field, there are no ugly fence-corners full of briars and weeds; the wheat and oats are remarkably clean of these intruders, and some of the corn-fields are almost as perfectly weeded out as an English turnip crop. It was a good sign to see a man with a scythe at work along the roadside; for it bore witness to the care that is taken to cut off the vegetation there before its seeding time, as well as to that other scarcely less important fact that farmers here do not expect to keep a portion of their stock at the expense of their neighbors and the public.

The population of Chester county is largely composed of the descendants of those who first occupied its lands under WILLIAM PENN, whose charter was dated precisely 180 years before the inauguration of President LINCOLN, namely the 4th of March, 1681. While many of the young men have gone to other callings, there has never been a large emigration to the newer Western States. The farmers here have been stout to withstand innovation, and consequently somewhat slow to adopt improvements, adhering to a method of cultivation when once adopted with great tenacity; but, on the other hand, they seem to carry out a thorough-going system in what they do undertake, and to be "regardless of expense" on any point in which stability and permanence are concerned. Their houses are built of stone, roomy and commanding; many of them have already served for one or two generations and bid fair to stand for the use of many more. Their barns are also of stone, and with the sheds extending around for the shelter of stock and manure, resemble—to compare great things with small—some gigantic and motherly "biddy" with wings outspread for the protection of her quadrupedal brood. These buildings, both dwellings and barns—are generally rough cast with plaster or gravel

coated, and then whitewashed; and this not only protects the walls against driving rains, but gives a tidy appearance to the farmstead, which, taken together with the size of the buildings, renders a Chester county farm-establishment something quite *sui generis* among American country homes. Another point that may be noted is the frequency with which the farmstead is found at a distance from the public road; a central location upon the farm having been quite commonly chosen for the sake of convenience in working it, instead of a site in which the farmer only consults the readiest mode of *getting away* from its duties to something else.

There appears to be a growing and already quite prevalent taste here, for fruits and flowers; and the Agricultural and Horticultural Societies have done much to promote improvement in this as well as in other and more practical directions.

To some of these practical improvements I hope hereafter to call especial attention, in giving a more detailed account of the way in which my time has been spent. In this hurried letter I desired to present a little outline of the appearance of the County and its farms to the eye; mainly to serve as an introductory sketch to what notes are hereafter to follow. I subjoin a list of the Officers of the Chester County Agricultural Society, which has not yet appeared in our columns, and shall have more to say hereafter as to the management and effective labors of this useful and energetic body.

OFFICERS OF THE CHESTER CO. AG. SOCIETY FOR 1861:

President—D. B. HINMAN.
Vice-Presidents—Joseph Dowdall, Dr. J. H. Eshleman, M. B. Hickman, Col. Saml. Ringwalt.
Executive Committee—Lewis Sharpless, W. M. Woodward, Nathan Garrett, C. W. Robert, T. W. Cheyney, Wm. Gibbons, Wellington Hickman, Chas. E. Hiestler, J. P. Hoopes, John Hannum.
Cor. Secretary and Treasurer—J. Lacey Darlington.
Rec. Secretaries—J. Bayard Jefferis, Wm. D. Sugar.

In the brief outline of Chester County farming already attempted, the connection was referred to that exists between the deposit of *limestone* in the Great Valley, extending for a distance of about sixty miles, from the Susquehanna to the Schuylkill,—and the progress of Agriculture throughout a large district both to the northward and the southward of this deposit. Lime burning has been practiced here for many years; the grandfather of Dr. GEO. THOMAS,—who was one of the pioneers in its introduction, and who died in 1793,—having done much before his death to call attention to the subject, and having first employed lime on his own land, as we were told by Dr. T., probably about the year 1787. The adoption of the practice, however, only became general by degrees; those who were first convinced of the benefit resulting from it, had a comparatively high price to pay, and it was not until the proof of this benefit was made very clear indeed, that the kilns became numerous and the farmers' teams began to cluster about each one, from distances of ten or twenty miles, as soon as the report went out that the freshly burned lime would be ready for delivery at a particular time.

As to the effect of lime, I was told of farms which would not cut half a ton of grass or five bushels of wheat per acre, by its application alone made to yield within four years, crops three times as large—say, a ton and a half of hay and fifteen bushels of wheat. Upon its first application I suppose that dressings as heavy as a hundred and fifty or two hundred bushels per acre may have been given; but the weight of experience appears to lean now to smaller and more frequent applications, and fifty bushels upon thinnish land, and one hundred on the best and strongest soils, put on at intervals varying from six to ten

years, or thereabouts, may be regarded as the customary rule. Employing the one apparently unvarying rotation of corn, oats and wheat, followed by grass, circumstances regulate the length of time that shall elapse before the grass is again broken up for corn, when, almost invariably, the liming is renewed. If, as is quite common, the grass is mown for two seasons and pastured two more, the rotation becomes one of seven years, with a liming always at its commencement; but if the pasturage is extraordinarily good, it may remain eight or ten years before being broken up,—in rare cases perhaps receiving a top-dressing of lime during this or a still longer period, although such a mode of farming would be regarded as out of the usual routine.

The generally excellent natural drainage of the land, already referred to, doubtless renders the efficacy of lime peculiarly great on the soils of Chester; for I suppose there is no fact more clearly proven, than that its action is at best exceedingly imperfect where stagnant water approaches the surface, or where even the escape of that which falls in rains is seriously impeded. Upon land seeded down to clover and timothy,—the natural grass of the region—the *poa pratensis* of botanists, the "blue grass" of Kentucky, the "smooth-stalked meadow grass" of English writers, and the "green grass" of Pennsylvania and Delaware—here comes in of itself, together with white clover, forming a fine compact sod; upon turning under this sod, preparatory for a renewed course of cropping, the decomposition of its matted roots and stems is accelerated by the action of the lime, and they are at once made available for assimilation by the ensuing grain-plants, while at the same time the soil appears to be rendered mellow in mechanical condition, and cleaner of weeds. It is probably in these respects that the application of lime so frequently as once in six or eight years, is found to be warranted by experience, although there are some who question whether this course is not now adhered to from long habit, rather than from certain evidences of its necessity.

Again, I suppose it is an accepted fact, that the repeated application of lime as a sole dependance without the use of stable manure, or without *allowing the land to lie in pasture* for a due proportion of time, is rather exhaustive than beneficial in its effects, by drawing too heavily and rapidly upon the vegetable constituents of the soil. But in Chester county, much attention is paid to the management of manure, and as it is a grazing country, there is no temptation to break up pastures prematurely. As I was returning to Philadelphia in the company of M. B. HICKMAN, Esq., an extensive and observant farmer, I inquired whether, after the application of lime for so long a period of years, there had been any symptoms of decline in the production of the land or diminution of the benefit derived from it; his answer was decidedly in the negative: those who "limed most, have been pretty sure to manure most," they are the best and most careful farmers in other respects, and their land is constantly advancing in productiveness. In the days before liming, a farmer on 200 acres was a "poor man." He thought that during the past twenty years particularly, the custom of liming had advanced with great rapidity.

The size of Chester County farms varies, of course, quite widely—say from less than a hundred up to here and there one of three or four hundred acres; but perhaps the average size is about 150. I was told that the cha-

racter of the farming I saw within a circuit of ten or fifteen miles from West Chester should be taken as not more than a fair sample of that throughout the County at large—a surface of four or five hundred thousand acres; or to arrive more nearly at a general estimate of the farming throughout the county—dividing it, for the sake of an estimate into these three classes—that if *one-fifth* could be rated as “poor,” and *one-fifth* as “medium,” the other *three-fifths* would justly rank as “good.” Near villages the land is rated at from \$125 to \$150 per acre, with some higher figures for extra improvements, and \$100 is regarded as a fair price for good farming land anywhere in the county. A farm of a hundred and fifty acres may have fifteen or twenty in wood; on a farm of this size there will very likely be bought a hundred sheep for pasturing during summer, sold fat in autumn, a breeding flock kept, numbering 20 or 30 head, and about 30 bullocks purchased in autumn, wintered on hay with little or no grain, and fattened on the pastures to go to the butcher along about harvest time. Four or five horses will be thought enough to do the work of the farm. If the farmer is himself a man of close attention to business, one assistant engaged by the year is all that he needs, with extra hands at harvest, and perhaps at corn-planting.

The contents of the barnyard go to the oat stubbles before plowing for wheat, which, as well as oats, is always drilled in. As to plowing, there is an ancient notion still very prevalent that about *three inches* is the proper depth for corn—the average would not be more than four inches—while for other grains they go a little deeper. But the more intelligent farmers are getting to think more favorably of plowing to a somewhat greater depth, and subsoiling has its advocates and some who practice it. Mr. DARLINGTON'S experience in nursery cultivation has shown very plainly the advantages of using a “double Michigan” that will go down 15 or 16 inches, and he says that he “could not grow fruit trees without it.” Not only would deeper plowing enable the plant roots to penetrate farther, so as to stand better during seasons of drouth; but it is also a common opinion—at least I heard it so expressed in England—that lime *sinks* by degrees below the reach of the root, and that subsoiling or deep plowing tends to keep it longer within an accessible distance, or to bring it again within reach, if already gone below it. The depth of the upper soil is sometimes ten inches or more, but the yellow clay below, if turned up in autumn, and exposed to the action of the winter frost, is not found by those who have fairly tried the experiment to have any deleterious effect upon the crop that ensues. The plow commonly in use, called the “Wiley plow,” was invented by a man of that name at Kennett Square, and the castings are made for it at Peekskill, in this State—it is employed for grain crops, and will run six or eight inches deep; the plow common for sod plowing is an old implement known as the “bar-share.” The use of the drill, as already intimated, is universal, and the roller is quite frequently employed before drilling, or in spring on the wheat land, if the frost has thrown out the roots, or more particularly to prepare the surface better for the use of a reaping machine. Of wheat, a bushel and a peck to a bushel and a half, is the common amount of seed per acre; of oats, two to two and a half bushels. No *spring wheat* at all is grown.

The *corn* is the large Southern, running up sometimes to a height of 12 or 15 feet, so that “a tall man can with

difficulty hang his hat on the ear.” The distance is four feet each way—three or four stalks to the hill, seldom more than one ear to the stalk. All the cultivation of the corn is done by horses—the cultivator employed being two feet two inches wide, so as to lap a little in running twice between the rows. It has five teeth, two on each side and one on the center-piece of a triangular framework; and as the two on the side that runs next to the corn hills are placed respectively nearest to the point and end of the implement, by a little skill in *steering* the thing, a careful driver may slightly vary his course so as to get the space in the rows between the hills pretty well stirred by the hindermost tooth, and not interfere with the stalks of the corn itself. As to the *roots* of the corn, there is probably not much doubt that in any such wholesale system of cultivation they must suffer more or less abridgment, as it is scarcely possible so to adjust the machine as to depth and distance as to cut off all the weeds and leave the plants entirely untouched. But this evil of horse cultivation as compared with hand-hoeing is doubtless much more than counterbalanced by its cheapness and the greater frequency and promptness with which it is performed. On the best farms seventy-five bushels per acre is not an unusually heavy crop, but the average, of course, is below this figure.

Our first day's drive, June 13th, carried us in a northerly direction from West Chester, across the Slate ridge to Oakland in the Great Valley. We stop, soon after setting out, at a commanding point on Cemetery Hill, for the prospect's sake; and the fine sugar and silver-leaf maples that shade the pleasant streets of West Chester borough, continue here and there to stretch their graceful boughs over the country roads and lanes. We pass, not far away, extensive marble quarries now unworked, but supplying an excellent quality of this material for the purposes of the architect. Just back from the Oakland station, we climb the hill—pausing at a smith's to scrutinize the different styles of cultivator teeth newly re-pointed before his door—and here we overlook the course of the Great Valley for many miles—a view still more extensive when the heavy foliage of the trees is stripped away in Winter, and variegated with the most brilliant of colors when the frosts of Autumn are at work among the maple leaves. We can judge something—as we glance along the farther slope of the Valley—of the proportion of land, in each farm, under wood; while the brown surface of fields as yet but faintly dotted with the growing corn, or the wavy ripples coursing with every breeze over the headed wheats, enable us also to distinguish between the farmer's grains and grasses—pasture and meadow land far exceeding in proportion that which shows these signs of recent tillage. Thence to the farm of Dr. THOMAS, which gives its name to the railroad station, and which stretches across the Great Valley, and forms a part of the 5,000 acres which Richard Thomas or Ap Thomas held eight generations ago, by direct purchase from WILLIAM PENN—a purchase at 50 cents per acre or thereabouts, much of which still remains in the possession of his direct descendants, in whose hands it has reached its present value of two or three hundred times the original cost, and one or two of whom hold their farms to this day by inheritance from father to son, *without any other title on paper or of record*, than the original deed under the sign manual and seal of the founder of the State.

But we need not go back a hundred and eighty years

for reminiscences of interest in a locality so rich in historical attractions to every American. The residence of Dr. THOMAS stands now—with some additions—as it stood during the days of the Revolution; and the walls of the very room in which we first sit down—a spacious apartment, indeed, ninety years ago—witnessed the silent gatherings of the Friends, while their regular House of Meeting was doing patriotic hospital service for the many sufferers from the Camp at Valley Forge, six miles away, during that long, weary, freezing winter of 1777-8. Here, in those times of trial, the prayers of the non-combatant could at least be offered up in behalf of the great Leader then straining every nerve in a good and glorious cause; but in these later days—testing a second time our devotion to the Country and the Union for which he fought and prayed—the bonds of the creed of brotherhood and peace appear to have somewhat relaxed their hold, for the descendants of those who then could only pray for the triumph of the right, or watch at the bedside of the wounded, are now many of them shouldering the musket, and making their way toward other camps at Harper's Ferry or Richmond. May they soon, with others as gallant and true, conquer the peace which was so dear in the faith of their fathers!

ICE-HOUSES.

We have recently made some experiments with ventilating ice-houses, showing the great advantage of admitting *warm air* to the sawdust which covers the ice at the top. A house, with double walls filled with sawdust, received last winter its usual supply of ice; and the upper door, through which the ice was passed, carefully closed. It was found this summer to be rapidly melting. The door was opened, and the melting ceased. This has been since repeated, and invariably with the same results. When the door is closed, and the air above the ice thus enclosed, becomes cold, the ice sinks away; when it is opened, and air admitted freely from the outside, the melting ceases. This will perhaps be accounted for in different ways by different persons, but the true explanation is probably this: When the door is closed, the air above the ice is reduced in temperature, and as a necessary consequence becomes heavier and sinks or forces its way downwards through the sawdust. Its temperature being above freezing, (although much below that of the common air,) it carries a constant stream of warmth to the ice and melts it. When the door is thrown open, and the air outside freely admitted to blow over it, this air cannot become cooled, and does not sink, and the ice is unharmed.

We have many inquiries from our correspondents, why their ice melts away so rapidly. As a general answer we might say, you take too much pains in building tight ice houses. *We never saw ice keep better than in a board shanty.* The air must blow freely over the top of the sawdust, and this shanty was open all around. A rough floor admitted free drainage; about eight inches of sawdust was spread evenly over this floor; the ice then built up in square blocks, leaving about eight inches around next to the siding of the shanty, which was filled and *packed in* as the structure of ice went up; and lastly, the top was covered with about eight inches of sawdust. This was the whole process. The ice kept perfectly; was used all last summer, and about two tons, which was left over was thrown out last winter, when the building was refilled.

A thickness of eight inches of packed sawdust may be regarded as a perfect non-conductor of heat, for all practical purposes—perhaps six inches would do, if fine and evenly packed. If not packed, it may have cavities or orifices, and admit enough warm air to melt the whole.

GEN. GOE'S ANNUAL SHEEP SHEARING.

Gen. JOHN S. GOE, the well known breeder of improved domestic animals, held his annual sheep-shearing for the present year, on the 30th of May, at his residence near Brownsville, Pa., when a committee was appointed, of which J. G. Streat, Esq., was President, and J. Worthington, Secretary, to superintend the shearing, weigh the fleeces, and to report on the stock generally. A copy of their report has been sent us, from which we learn that the fleeces of five Spanish Merino rams, unwashed, averaged 11 lbs. 5½ oz. each—that the fleeces of ten do., washed, averaged 8 lbs. 13 oz. each. The fleeces of 42 Spanish Merino ewes, washed, averaged 5 lbs. 15 oz. each. The committee speak of these sheep in the highest terms, as they do also of Gen. Goe's breeding horses, cattle, swine, &c. He is also breeding the Cashmere Goat from animals procured from the celebrated flock of Col. R. Peters of Atlanta, Geo., which the committee say are beautiful animals, and readily adapt themselves to the climate. The fleece of a Cashmere buck weighed 2 lbs. 3 oz., and that of a doe, 2 lbs. 12 oz.

MARAUDING CATTLE.

Cattle may be educated into almost anything. A quiet cow may be converted into a skillful jumper in a single season. The first requisite for such training is short feed, resulting from overstocking. The second is low fences; and the third, tempting crops of corn beyond these low fences. In the spring grass is usually good, and corn and other crops are small and uninviting; but during this present midsummer period, when pasture is dried up, the process often begins. One or two rails are accidentally knocked or blown from the fence; the quiet and orderly animals stretch their heads over to reach a morsel of the tall grass; they throw down accidentally two or three more rails, and finally leap over. The owner drives them out as soon as they have learned the difference between delicious food on one side and short commons on the other, and puts up a rail. They have already learned to leap a little, and the next day they improve and go a rail higher. Another rail is added, and the process is repeated until they become quite expert.

It is now a very busy season, but the farmer should not neglect his fences; if rails are thrown down, replace them before cattle find it out; keep fences high at all times; and if the animals should actually break through, add rails enough to make the barrier entirely impregnable at once.

CHAFF IN ANIMALS' EYES

Cattle which eat straw from a stack, or thrust their heads into large piles of straw, sometimes get barley beads or oat chaff into their eyes, inflaming and shutting the eye, causing the flow of water from it, and sometimes producing blindness.

S. E. Todd states in the Ohio Farmer, that after trying for a cow partly blinded with oat chaff, the various remedies generally prescribed, including powdered burnt alum blown into the eye, the use of honey, &c., to no purpose,

he found the best remedy, and one entirely effectual, was to take a silk pocket handkerchief, draw it tightly over the end of the finger, and after having raised the lid as much as practicable, thrust the covered finger carefully into the eye. The chaff adhered to it, and was at once brought out. He has always succeeded with this remedy. If the finger is not large, it may be passed all around the ball. The animal, if not gentle, will require tying.

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[For the Country Gentleman and Cultivator.]

Pitching Hay with a Horse Fork.

A little good skill is as necessary when pitching with a horse fork, in order to do it with ease and rapidity, as it is when pitching with a hand fork.

If a load is heaped up in the middle, thrust the fork into it, at a little one side of the highest place, and take up a small forkfull; and if a load is about level, or even on the surface, take a forkfull at each end first, and then you will be able to get one of good size in the middle. But when the fork is thrust *first* into the middle of the load, it will sometimes lift and tear out more than can be elevated, and it will be necessary to release a portion of it; and then it will be difficult to get a forkfull of a good size. But, by standing a little one side of the middle of a load, and by handling the fork right and left, and then directly before you, the forkfulls will come up with far less force than when the fork is thrust in at random. A man who has but little skill, will often make very laborious and slow work, when pitching with a horse fork, and will make very hard work for a horse also.

Which is the Best Kind of Horse Forks?

They are all the best according to the recommendations of their respective manufacturers; but for the benefit of beginners, I will simply point out the imperfections of some, and the great superiority of one kind over another.

The ordinary fork—i. e. the kind which has simply a long handle inserted in the same head where the tines are fastened, and which, when it is in operation, must be kept in the proper position by means of a balance rope attached to the end of the handle, is better than some, and not so good as others. The objections to it are, it requires the strength of a man to work it, and it is sometimes very hard work to use it; and a large space is very necessary, or it cannot be worked at all; and more than all else, if a horse exerts a force sufficient to elevate two hundred pounds of hay with one of this kind of forks, half of that force is consumed to no good purpose at all, in consequence of the very disadvantageous manner in which the force is applied in pitching. When, for example, there are one hundred pounds of hay on the fork, the workman must necessarily pull down on the handle enough to balance that one hundred pounds; and therefore, the horse must exert force enough to draw up two hundred pounds of hay, when there are only one hundred pounds on the fork. It is very like putting a bushel of grain into one end of a bag, and a stone in the other end to balance it, and hanging it across the back of a horse, as our ancestors were wont to do when they went to mill.

There are the same objections to the kind of horse-fork which has two ropes at the end of the handle—a balance rope and a latch rope—that there are to the kind already mentioned. This last mentioned is very objectionable on account of *two ropes* to be handled, when one is as much as a man knows how to get along with; and more than this, there is a great objection to the hinge near the head, as it renders it more complicated, and more liable to get out of order. The one having a hinge and latch is a little more convenient, in some places, than the one with a handle rigidly secured to the head.

Now we come to the *best* kind of horse forks. It is *best*, because it is *more convenient* than either of those just alluded to; it costs less; it will take one hundred pounds of hay with about half the force of the horse that the others require; it needs no balancing, and, consequently, the man who pitches, has comparatively easy work; it will work in less space than either of the other

kinds, and a very important feature of this fork is, after a forkfull has been elevated above the mow or stack, before it is dropped, the horse can be backed up and the forkfull lowered, and swung off to either side of the mow, and dropped where it is needed. This cannot be done with the other kind of forks, because as soon as we begin to lower them a little, the hay will slip off the fork.



The above illustration represents the best kind of horse fork now in use. It can be procured of EMERY BROTHERS in this city, and also we presume at R. L. ALLEN'S Ag. Warehouse, New-York, and at PASCHALL MORRIS' do., Philadelphia—price \$7.

The chief difference between this kind of forks and the others is, the handle of this is inserted in the head at nearly a right angle to the tines, and the draught rope is held at the end of the handle by means of a latch which is unlatched by a small cord. S. EDWARDS TODD.

DRIED PLANTS FROM OREGON—HOW TO DRY PLANTS.—

The large collection of dried plants, which a correspondent has kindly sent from Oregon, we regret to say, is not in a condition for examination and for identifying the species. Either very small portions of the plants are given, or else they are so folded together that it is impossible to open them out without breaking them to fragments in their dry and brittle condition. Instead of being folded up to a surface of only one inch by four, as they were, many plants require to be placed in folds of paper, at least eight inches by a foot, or larger, in order to exhibit the different parts of the plant. We hope our correspondent will try again, and give us more perfect specimens, and it will afford us pleasure to give him the names.

The best herbariums, or plant cases, have folds of paper about a foot wide and a foot and a half long; half this size will answer tolerably well for most plants. When they are two or three feet high, as much as possible must be given in connection with the flowers, and when the leaves are of different shape below, they must be given separately. Tall, slender plants, may be sometimes doubled, but the parts not folded together.

The easiest mode to dry plants, is first to procure a quantity of old newspapers; fold them together of suitable size; then place the fresh plant, when in flower, between the folds, and bring the folds together, spreading out the parts of the plant at the same time, so that the whole may have its natural attitude as nearly as possible. Lay a board on the paper to keep it to its place; and when the desired number of plants are thus prepared in separate papers, lay a stone or other weight of several pounds upon the board, and let them remain a few hours or over night. The paper absorbs the moisture of the green plants, and becomes quite damp in a few hours. Then open the pile, and place each paper, with the plant within its folds, on shelves or over the floor, for two or three hours, longer or shorter, according to the dryness of the weather, until the papers are dry, but not until the plants curl up. Then place them under the stone again, for a day, and repeat the drying process. Increase the weight as they approach thorough dryness. Only one plant (unless quite small) should be placed between the folds of a single paper. When perfectly dry, take them out, and several may be placed in a fold, for keeping, or sending to a distance. Mark the time they flower on a slip of paper attached to each, whether growing in wet or dry ground, on rocks or in swamps, woods or open ground, wild or cultivated; number each, and forward them to us between stiff pasteboard, to prevent their breaking. Postage from Oregon 2c. per oz.

[For the Country Gentleman and Cultivator.]

FARMING IN NEW-HAMPSHIRE.**State of the Crops.**

MESSRS. EDS.—During the past week I spent several days in visiting some of the farms and farmers of Merrimac Co., N. H., and jotted down a few notes in reference to the growing crops, and the management of some of the farms I visited.

Up to about the 10th of June, the season was wet, cold and backward, and many of our farmers were late in sowing and planting, and from using bad seed-corn many had to replant, so that many fields I saw were looking anything but promising for a good crop. But the larger portion of the fields I noticed, were of a good dark green color, more especially where superphosphate of lime or other manure had been used in the hill. I presume there has been ten times the quantity of superphosphate used in our county this season over that of any previous one, and if the difference is as great in the yield of corn at harvest as in the growth of the plants at the present time, between those receiving the phosphate and those not manured with it, the manufacturers of a good superphosphate need not fear overstocking the market another season. But, by the way, farmers should understand there are other valuable concentrated manures beside superphosphate, some of which are equally good and vastly cheaper, to which I will allude hereafter.

For the past three weeks there has scarcely been rain enough to "lay the dust," and most of the time it has been comfortably warm, with much drying winds, so that the grass and grain have suffered badly for lack of rain, upon the light dry lands—and I saw hundreds of acres of June grass and clover that ought to have been put in the barns last week; but on the heavier and naturally moister lands, the crop of hay will be large, and of first-rate quality—as it is one of those seasons that occasionally comes round, when there is an extraordinary amount of red and white clover mixed with the long-leaved grasses in the old mowing fields and all our wet runs, thus nearly or quite doubling the quantity and value of the hay crop over that of some other years. Why it is that such a superabundance of clover should thus suddenly make its appearance for one or two seasons, and then as suddenly disappear for a number of years, is perhaps a matter not so easily solved, though it is possible that a "natural rotation of crops" may have something to do with this and similar phenomena.

The growth of clover in this section, on the fields laid down to grass in 1859 and 1860, is very heavy—as good as can be found elsewhere; and this fact proves conclusively that clover can be successfully grown on other than limestone soils. The growing of clover does not wholly depend either upon the greater or less amount of lime or ammonia a soil may contain, but mainly upon a good supply of some nine or ten kinds of available mineral matters in the soil. The carefully conducted experiments of Messrs. Lawes and Gilbert, "with different manures on permanent meadow lands," puts this question beyond all cavil.

Within the past ten years the farmers in this region have gone somewhat largely into the growing of winter wheat. In my jaunt I saw, perhaps, towards a hundred fields, many of them first rate, but a majority of them were more or less mixed with rye, and in some fields, the owners will harvest more rye than wheat. To my view, this smacks strongly of carelessness and bad calculation on the part of the farmers. It is just as easy to raise pure wheat, as a mixture of wheat, rye, chess and cockle—besides, clear wheat makes the best bread, and always commands a higher price in the market.

I have read much discussion in the agricultural papers, in respect to the object of the yellow bird in stripping the heads of wheat while the grains were in the milky state—some writers, giving it as their opinion that it was the soft milky kernels that the birds were after—others asserting it was the orange colored midge they sought. From careful observation, I am fully satisfied

that it is the soft grains of wheat they seek, and not the midge, for up to this date July 2d, after the most diligent search, I have not found the first midge in my wheat, while hundreds of heads have been completely shelled by large flocks of yellow birds. The sweet milky kernels are choice food for these beautiful but thievish pests.

The prospect for fruit is not very promising. The great yield of apples last year sapped the trees badly, and the past winter, from some inexplicable cause, was a hard one on fruit trees, vines, &c.

A large portion of our old pastures are being badly over run with brakes, ferns, white weed, hardbacks and other useless intruders—in consequence of which, the feed is poor, scanty and innutritious, and every year growing worse. How the rocky, steep hillside pastures that are now so poor in feed, are to be profitably renovated and made to produce good succulent feed, is a question not easily solved. The daisy or white weed, on many farms I noticed, has obtained permanent foot-hold, and some mowing fields I saw, were nearly as white with the blossoms of the weed, as they were last winter when covered with snow. This weed, when first introduced upon these farms, might have been exterminated, root and branch, by a few hours of well directed labor—but when it once gets disseminated over several acres of a farm, it is a *real* *cud* to completely oust it, as I have found by over twenty years battling it. However, by perseverance I have come out "first best" in this warfare with the daisy.

Farming of Col. D. M. Clough.

I took notes of some things I saw and learned at two of the farms at which I spent a few hours. The first was owned by Col. D. M. CLOUGH, beautifully located upon the east side of the Merrimac river, opposite the pleasant village on Boscawen Plain. The farm buildings are about 50 rods from the river—half a mile from a depot on the Northern railroad, and a fourth of a mile from the depot on the Concord and Montreal railroad. The home farm contains 500 acres, 200 of which are alluvial or intervale; 150 is above high-water mark, every one of which is plowable. The low intervale produces heavy crops of blue joint and other natural grasses.

Mr. C. has planted much less corn this than in previous years, having but five acres in corn, 3 acres of potatoes, 23 of oats, 1½ of barley.

It is six years since Mr. C. purchased the farm, which was badly run down when he came in possession of it. It had been rented for 25 or 30 years previously; the object of the occupants being to obtain the greatest returns for the least amount of labor and manure expended. Six years ago there was less than 25 tons of English hay cut upon the farm, and about the same amount of poor or low ground hay. He now cuts 70 tons of English, and 30 tons meadow hay.

The large old mansion house has been remodelled and handsomely fitted up. The old barns have long been taken down, and a splendid one, 110 by 41 feet, with 19 feet posts, has been built. The exterior finish of the barn is the same as that of the house, viz., clapboarded and painted white; the interior is finished to correspond. The hay is driven into the eastern end of the barn, the upper floor being 16 feet above the sills, so that the pitching of his 100 tons of hay is *down* instead of *up*. The basement or cellar extends to the same length and width of the barn, the north side and ends being handsomely walled. The south side of the cellar is open, the bottom of which is on the same level with the yards, of which he has four, with a full supply of water in each.

His grass is all cut with a mowing machine, and raked by horse power. He thinks his hay can be cut and placed in the barn at a cost not exceeding two dollars per ton.

He keeps about 70 head of cattle, with horses and sheep to match, and from 6 to 10 hogs, which he keeps profitably employed in composting muck, clay, and manure. This is the great secret of his success in improving the farm. He has cut a ditch over a mile in length, from 3 to 7 feet deep, draining some fifty acres of alder, and other swampy land, which is fast being brought into a

good quality of grass. By draining the swamp he has access, at all seasons of the year, to inexhaustible quantities of excellent muck, and within a few rods of his barn he has an abundance of clayey marl. The muck and marl composted, proves quite as valuable on his worn out alluvial soil as yard manure.

As confirmation of the foregoing statement, I must give the following facts: In 1859 he had 13 acres of inverted sod land heavily manured, planted with corn—next year sown with oats. In the spring of 1860 he plowed five acres adjoining, manuring wholly with a compost of muck and marl, and sowed with barley; both the oats and barley gave a heavy yield last year, and now the 18 acres have a very heavy growth of clover and other grasses. But the crop on the muck and marled portion of the field, is much the heaviest, portions of which were badly lodged last week, and need cutting.

Last year he had a field of six acres in corn, adjoining which, last August, he turned over five acres; and by the side of this last he plowed five acres more of sod land in May of this year. The inverted sod land was manured this spring, and the whole field, (16 acres,) sown with oats and grass seeds—the oats on the five acres plowed in May being much the best; those on the August plowed land being much better than those on the corn stubble ground. The land is much infested with twitch grass, and Mr. Clough supposes, on that portion of the field plowed this spring, the oats got the start of the twitch grass, which accounts for their greater growth.

With the manurial resources of the farm, and the skill and energy of Col. C. and his sons, we believe he may profitably double the crops upon his farm in the course of another six years. He has the means of cheaply irrigating several acres of his mowing grounds, as also his spacious and well kept kitchen and fruit garden.

It is a standing rule with Col. C. in his farming operations, to stock down no land to grass unless it is in a much more fertile condition than when broken up for the hoed crop—a rule every farmer should adopt and rigidly carry into practice. If such was the general practice of farmers, we should hear less of short crops, exhaustion of soils, and "the prospective sterility" of our cultivated lands.

Farming of Hon. W. H. Gage.

About three miles south from Col. Clough's farm, is that of the Hon. W. H. GAGE, one of the most beautiful and highly productive farms in the county. It is located on the west side of the Merrimac river, half a mile from the large and (till recently) thriving manufacturing village of Fishersville, which affords a home market for all the surplus products of the farm—and this too without the agency of "middlemen," that too often step in between the producer and consumer, to the great injury of both.

The farm contains about 500 acres—150 of which is covered with a valuable growth of wood and timber; 150 acres of intervale—100 of which is plowable, the balance yielding a heavy growth of low-ground hay, making what is here termed a fair quality of stock hay. Being overflowed by every freshet, the sediment left by the retiring waters keeps up the fertility of the soil year after year, rendering any other manuring unnecessary. The balance of the land is in pasture and upland fields.

He usually plants six acres with corn, the land being heavily manured—three acres of potatoes, and two or more in beans, roots, garden truck, &c., and this year has some eight to ten acres of oats, barley, &c. Cuts about 125 tons of hay annually—selling from 25 to 30 tons in the field, not having barn-room to stow away near all the hay, fodder, &c., grown upon the farm. His largest barn, 84 by 42 feet—17 feet posts—has been built twenty-five or more years, was at that time considered the number one barn of the county; but hundreds of more recently built barns in the county, far outstrip in many respects that of Mr. G.'s. He has another barn about 40 feet square, besides sheds, cattle and sheep racks, and one of the best "pork-making" establishments I have ever seen, usually fattening eight or more large hogs. The farm stock numbers two horses, colts, three yoke of large oxen, eight cows, and young stock—bringing the whole up to 45

to 50 head; till recently, he has kept 120 or more fine sheep, but at the present time he has less than 100.

The northern railroad passes through the whole width of his farm. The corporation took 9 acres of it for the roads. The track was laid within two rods of his house, which obliged him to remove it several rods westerly, and it has been remodeled and finished anew, in modern style—such a residence as a hardworking, industrious and independent American farmer is entitled to. One of the large rooms of the house is finished entirely with that beautiful wood, the "American black cherry," and being beautifully varnished it compares favorably in appearance with good specimens of mahogany.

Mr. Gage, like Col. Clough, farms upon the principle of leaving all his hoed land in a much more fertile state when stocked down to grass, than it was at the time of "breaking up the sod," and plows no more than can be well manured and properly worked or cultivated. Therefore he does not raise so largely of grain crops as some other farmers do, as hay is the leading and most profitable crop in his location. Last year was rather a bad one for his corn, raising only about 320 bushels, the same amount of oats, 90 of rye, 40 of barley, and 500 of potatoes—besides beans, roots, squashes, &c., &c. Much discussion has been had recently in the Agricultural Journals, in respect to the profit of farming as an occupation. It is like all other business pursuits—good or ill success depends upon various contingencies, as well as upon the tact and good judgment, and business qualifications of the man. Mr. G. would be unwilling that I should here go into a history of his business matters, &c. But I will here just say, he, like thousands of our young men, started, when of age, upon the great voyage of life, without a dollar in the locker, and without entering into any hazardous speculations he has acquired a handsome estate. His farm would sell under the hammer for \$25,000—and he has other resources which are the results of many years industry and attention to business. The example of such a man cannot but result in good.

July 4th.—Since writing the foregoing we have had some twelve or more hours of rain, which has produced a most striking effect upon our corn, grain, grass, and other crops. This rain insures an extra crop of hay—which was rather doubtful a few days ago.

Warner, N. H., July 4th, 1861.

LEVI BARTLETT.

[For the Country Gentleman and Cultivator.]

Grape Wine.

Wine may be made from the Isabella grape on a small scale, by picking the fruit in clear, dry weather, when perfectly ripe, and after picking out all the immature and unsound berries, put them in a tight box or tub and mash them with a pestle or pounder, having the lower end square. Reduce the fruit in this manner to a fine mass, but do not break the seeds while pounding. The next process is the extraction of the juice, which may be done by placing the mass in a coarse bag or sack, and submit it to pressure. If a cheese or portable cider-press is at hand, make use of it; otherwise place the bag between planks, and lay stones on them. When the juice ceases to run, remove the pomace to a tub, and after breaking the cheese fine, sprinkle on a quantity of clear, soft water, to dissolve and draw out the remaining juice. When all the juice is expressed—which is usually from 12 to 16 quarts per bushel of grapes—to each quart of the juice add half a pound of white granulated sugar, stirring and shaking it until the sugar is completely dissolved. Put the liquor into a cask, (clean of course,) which should be full, in order that the impurities may flow over by fermentation at the bung. Some of the liquor should be reserved in a pitcher or bottle, to fill up as often as it sinks below the bung. After it ferments eight or ten days, put in the bung tight, and let it rest in a cool, dry cellar; there to remain until March, when it should be racked off into a clean cask, well sweetened with a brimstone match burned within. As it undergoes several changes the first year, it is well to let it remain in that state until late in the fall, when it should be again racked off into a cask, and if it is not fine and bright, it would be well to fine it with sweet milk, or with the whites of eggs beat up with sand. In the course of a few weeks, if everything works favorably, it will be fine and bright, and fit for use. C. N. BEMENT. Among the Green Mountains.

SAVE YOUR SEEDS.

There are many kinds of garden seeds, wanted in small quantities, that may be more cheaply purchased at seed stores than raised at home. There are others which every farmer or gardener may raise and save for himself. Provided the work is well done, the more that each one saves for himself the better; for he may not only secure any excellent or favorite variety, and be sure of having the genuine sort, but he may be sure that his seeds are fresh, and not a portion of old mixed with new, as often happens when he obtains them from irresponsible sources.

Always select the *best* seed where the supply is abundant. If earliness is desirable in the variety, take those which ripen first. This will be necessary in order to *maintain* the character for earliness. The tendency is to run back, and this will be the result unless pains are taken to prevent it. Such selection will also afford a chance of not only maintaining, but improving the quality. The same care must be taken to secure any other point, as size, excellence of flavor, productiveness, &c. Always take the best.

There are some seeds which farmers pay considerable sums for, which they might as well raise for themselves. We do not allude to corn, wheat, &c., which should not only be home raised, but which should be as carefully selected for improvement as garden seeds, but to smaller seeds, such as carrots for example. These may be had of excellent quality by setting out the finest roots, and saving the finest central bunches of seeds. Parsnip seeds are easily raised, and the field crop is valuable.

The seed of all crops, when ripe, and before they begin to scatter, should be cut, tied in neat bundles, distinctly marked, the name and date, and placed in a dry apartment. When quite dry they should be threshed or shelled, and neatly put up in cotton or paper bags, and placed beyond the reach of depredators.

[For the Country Gentleman and Cultivator.]

DOMESTIC WINES.

MESSRS. LUTHER TUCKER & SON—In looking over your last number, I notice a case or inquiry for directions about making currant wine.

I have heretofore paid considerable attention to the preparation of wines, liquors, syrups, &c., and have seldom missed a season without preparing more or less of these articles.

A good wine for home use, and what I esteem a grateful and harmless beverage, can be made from most, if not from all of our domestic fruits.

The "Bath Champaigne," which gained considerable notoriety in England, was made from the Rhubarb or common pie plant.

The most convenient rule to follow in making wine from currants, cherries, blackberries, &c., is to allow 15 lbs. of the ripe fruit and 15 lbs. of sugar, to make 5 gallons of wine. Weigh the fruit and put it in a tub; pour in a little water and jam with the end of a stick to a punniece; then strain or press the juice entirely out. Now add the sugar to the juice, stirring until dissolved, and then add water enough to make the whole measure 5 gallons.

If brown sugar is used, the raw West India is the best.

Pure soft water should be used, or the mixture may be heated and skimmed, then allowed to cool and poured off free from sediment. About half a gallon of water should be added extra, while heating.

The wine should be put into none but a very clean keg or barrel, and of a size that can be filled nearly full. Set in a cool place with the bung out until it is done working, when the bung should be put in tight, and allowed to stand six months; it may then be bottled for use.

At this point it may be very much improved in body and flavor by adding the following: Put into a gallon of pure

spirits of brandy proof, 2 pounds of bruised fresh Malaga raisins and about one dozen cloves; let this stand for several days, until the flavor of the raisins is thoroughly extracted, drain it off clear, and add it to the 5 gallons, when it is ready for bottling. In either case, the wine will improve very much by age.

P. C. INGERSOLL.

Green Point, L. I., June 28.

Firm of Ingersoll & Dougherty.

[For the Country Gentleman and Cultivator.]

CURRANT WINE.

To make currant wine of first quality, and that which *will not sour*, it is essential that the currants should be picked in a clear, dry day, and when *fully ripe*, but not over ripe. If over ripe, they are usually shrivelled a little, and are then unfit for first quality wine. The juice should be expressed from them as soon as possible after gathering, and before fermentation commences, which may occur in one or two days after they have been picked in warm weather. In a small way they may be crushed with the hands, or bruised in a tub and the juice expressed in a coarse cloth by squeezing with the hands. On a larger scale they may be crushed in a small portable cider mill, and the juice extracted in a press.

To every gallon of the juice add two gallons of clear soft water, and to every gallon of this mixture add four pounds of coffee crushed sugar. Put this mixture, after the sugar is thoroughly dissolved, into a clean keg or cask, according to the quantity you have, and fill up so the liquid comes up even with the top of the bunghole; this is to allow the scum and impurities thrown to the surface during the process of fermentation to escape. You must manage to have left over a little of the mixture, perhaps a quart will answer, for the purpose of filling up the vessel three or four times a day, as it gradually loses in quantity by the process of ejection at the bunghole, and evaporation. Let the fermentation continue about the period before named, then close up the cask before the fermentation has entirely ceased, but after the most violent stages of it have passed by. This can be ascertained by placing the ear to the bunghole, and listening to the singing of the effervescence and noting its gradually diminishing action and force. On closing, drive in the bung tight, and let it remain at rest until the February or March following, when, if it is perfectly fine and transparent, it may be drawn off and bottled. If it is not fine, it may be made so by adding to every gallon of the liquor $\frac{1}{4}$ ounce of sulphite of lime. Draw a quart or so of the liquor and dissolve the sulphite, and return the same to the cask, and mix thoroughly by stirring and shaking. In the course of one or two months it will become perfectly fine and bright. When, however, everything works favorably no fining is required.

After the foregoing recipe we have succeeded in producing a wine much approved and admired by all who have partaken of it; the only objection made was in being a little *too sweet*, but this will, in a measure, wear off by age.

Elderberry Wine.

The berries, when ripe, are picked by the stems, then stripped with the hands, or trimmed with shears. Next they are mashed fine, which can be done by means of a pounder, similar to those used for pounding clothes. Let them remain until the next day when the juice is pressed out in a cheese press, or any other convenient way. Next, boil the juice twenty minutes; skim it, and add four pounds of sugar to the gallon. When milk warm add a small piece of bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Some add spices to the liquor when boiled. This is a great favorite with the English.

C. N. BEMENT.

Recipe for Currant Jelly.

The following recipe is furnished for the COUNTRY GENTLEMAN by Mrs. J. L. D. of Pennsylvania. It will be seen that the manner adopted is exceedingly easy and expeditious; and, from personal trial of the jelly made according to these directions, we can testify that nothing was wanting either to the eye or taste, to render it beautiful and excellent:

One pound white sugar to one pint currant juice. Boil the juice by itself for *five minutes*; meantime heat the sugar hot in the oven, then add the sugar to the juice, and let them boil together *one minute*, and the process is accomplished.

[For the Country Gentleman and Cultivator.]

Clover, Gypsum and a Timothy Sod for Wheat.

MESSRS. EDS.—A few months since there was some discussion in the Co. GENT. upon the clover and gypsum question, as also upon growing wheat upon an inverted timothy sod. I took some part in the discussion of the above named subjects, in consequence of which I have received several letters in reference to them.

From one, written by an intelligent planter of Maryland, received a few weeks since, I make the following extract, in which he says—"I have read with much edification your communications in the Co. GENT., upon the subject of *"Clover and Gypsum as a manure."* As a means of sustaining and improving the lands in our section, these articles have been for a long time very generally resorted to, and I had supposed every agricultural community were fully aware of their importance. A long continued and free use of gypsum on some soils, however, may, I am induced to believe, be productive of injurious results to the grain, producing *rust*, and possibly other diseases therein. Such is the belief and experience in some sections of our county; consequently it is now more sparingly and cautiously used than heretofore. On our limestone lands its beneficial effects have been but slight, while on our slate and gravelly lands, (the latter now our best wheat lands,) its good effects have been particularly marked. It was this with clover, that brought these lands to their present position of productiveness, and now they have a sufficiency of that in which they were before deficient; any additional quantity proves injurious, upon the principle, I suppose, that 'too much of a good thing cloyeth.'

"On our light lands, (red slate or shale, for instance,) we do not experience the same beneficial effects from the use of clover as a manure, as is exhibited on our stiff, heavy clay lands. On the latter we find clover to act like a charm—having the effect, in addition to its fertilizing properties of loosening and lightening the soil—and gypsum a powerful stimulant to the growth of clover. On the former we find that clover has a tendency to lighten a soil now already too light—causing the clover and grain to freeze out during the winter, and the land, where hilly, to wash, and therefore a good crop of wheat seldom follows the turning down of a crop of clover. Wheat on a *timothy sod* is much preferred, and produces a more certain crop, the sod having a tendency to stiffen the soil and prevent its freezing and washing."

Remarks.—Clover and gypsum have been successfully used by the farmers of Onondaga and other counties of New-York, for sixty or more years, for the purpose of keeping up the fertility of their soils, and this too, apparently, without producing any injurious effects upon the soil or crops.

But the same favorable results might not follow in some other localities, and on differently constituted soils. In some places the land becomes "clover-sick"—and will only grow clover after the intervention of other crops, and manuring, for perhaps ten years. The reason of this, in England, does not appear to be fully understood; but here, our farmers know nothing of clover-sick land. Perhaps from frequent and liberal applications of gypsum, some soils may become "plaster-sick," and this may "be productive of injurious results to the grain—producing rust, and possibly other diseases therein," as suggested by the writer quoted from. Some ten or more important mineral ingredients are necessary in a soil, to constitute a fertile one. The application of gypsum adds to a soil sulphur and lime, but no phosphoric acid, potash, soda, &c., though the action, in part, of gypsum may be to render some of the above-named ingredients naturally in the soil, soluble. But long experience has taught the great fact, that as a general rule, for the most successful farming, a rotation of crops is necessary, and doubtless a rotation of *manures* is advantageous. The long continued use of either plaster, ashes, lime, guano, superphosphate, &c., upon the same soil, is generally supposed to hasten sterility,

and they cannot in general be depended upon for continuously maintaining the fertility of the soil. Says Prof. S. W. Johnson, "The great practical lessons taught by experience and confirmed by science, relative to the use of manures, are, *save all refuse which contains any of the elements of vegetation; apply abundantly the mixed ingredients of the dung and compost heap.*"

The farmer who pursues the above recommended course will have little occasion to expend largely of his money for high priced, commercial manures, and if he does purchase such, if rightly applied with the more bulky manures of the farm, in conjunction with a judicious rotation of crops, he need not fear the speedy exhaustion of his soil or his purse.

Upon the "stiff clay lands of Maryland," we have no doubt the clover and gypsum system of manuring, "acts like a charm,"—and will elsewhere, on similar soils—but to make the most of such heavy soils, *thorough drainage is necessary.*

We have found winter wheat to succeed well on a timothy sod, much better than that following hoed crops. Some of our farmers have grown good crops of winter wheat on "gravelly lands," obtaining 20 or more bushels per acre. To obtain good crops on these light open soils, requires heavier manuring than the more loamy and naturally fertile lands. The gravelly soils being naturally drained, the plants usually suffer little by the "freezing and thawings" of spring, compared with the plants on heavier and wetter lands; and as the grain matures earlier, it is less liable to injury from the midge, rust, &c.

Much discussion was had in the Co. GENT. some two years since, in reference to early maturing of wheat, to effect this desirable object for the purpose of escaping the ravages of the midge, rust, &c. Some writers contended that the farmer should obtain his seed wheat far south of his location, because the southern wheat, ripening several weeks earlier at the south, it would also retain its early maturing habits, when far removed to the north. Others contended, the farmer should go north for seed wheat, if he wished to hasten its time of ripening—the principle being the same as that in the case of corn. I do not recollect which party came off "second best" in the discussion.

My impression, at the time, was, and I so stated, that the earlier or later maturing of a variety of wheat, did not so much depend upon the latitude in which it had been grown, as upon an inherent principle of early maturing in the particular wheat itself, upon the same principle that we have early and late maturing varieties of apples, pears, corn, potatoes, &c.

Mr. Killgore's "Early May wheat" was ready for harvesting from 15 to 20 days earlier than other varieties grown in the same neighborhood—and doubtless about the same difference in ripening would have exhibited itself had the several kinds been brought from Kentucky and sown on Mr. Johnston's farm in western New York. Some persons I think started the theory that if the "Early May" was actually an earlier variety than that of any of the sorts grown in western N. Y., it would after a few years culture, conform its habits to the latitude in which it was successively grown for a number of years, each year growing later. It may be so, but there is an old saying, "What's bred in the bone, stays long in the flesh." I know that if a variety of wheat possesses the inherent quality of early maturing, six years consecutive culture of that variety on the same farm, has not yet made it a single day later in "heading out"—it being from eight to ten days earlier than any other varieties I have experimented with, and those are not a few. The variety alluded to, is the early Japan. I am sorry to say, it has not succeeded well with me, but it has not been injured by midge or rust, but the two past winters it has been winter killed, to the amount of one-half, while other varieties have suffered but little. But from the fact that for the past four years, the earliest heads have appeared by the first day of June, seems to clearly prove that this Japan wheat, has lost none of its early maturing habit by being cultivated in the Granite State. It is now June 6th,

mostly headed. It will be several days before any other of my varieties will show the first head. Rainy, cold and backward weather with us seems favorable to none of our crops, except winter wheat and grass, which now promise abundant crops. I understand that there is much failure in the corn planted. The seed having failed to germinate in consequence of the corn failing to ripen well last autumn, and not being properly cared for and dried. Experience is said to be a good teacher, but it sometimes proves rather an expensive one.

Warner, N. H., June 6, 1861.

L. BARTLETT.

[For the Country Gentleman and Cultivator.]

FARMING AS A BUSINESS.

MESSRS. EDITORS—On page 80 and 109, of Co. GENT. vol. 17, I find the question—"Will a young, industrious man, with from \$5000 to \$6000, make more money by buying a farm, or letting his money to interest." I can plainly see that this question is rather ambiguous, and does not properly require a definite answer until some qualifications are applied. For instance, a young man may be a foreigner, a merchant, or a novice in the art of farming; such I shall leave out of the question, and apply to only such as are acquainted with farming by experience.

I start with the assertion that what has been done can be done again. Twelve years ago I purchased a farm of 112 acres in the county of Genesee, on which I farmed it 4 years; then sold and bought one of 140 acres agreeing to pay for the same the sum of \$9,900, upon which I now reside; and I am happy to state that the debt is so nearly cancelled that by selling off some surplus stock, grain, &c., my farm would be clear from all indebtedness and some to spare.

You may ask the capital invested by me in the start. I will tell you \$500, and a pair of willing and determined hands, with a wife, at the age of 22 years. Some may say that luck has attended me. Very well, so it has; but bad as well as good luck has been a constant intruder; but the motto has always been, come boys, with the calculation of my own.

How would it have been if I had worked for wages, say \$150 per year and board, which is about the top price that has been paid on an average for the last 12 years. I can plainly see that I might to-day be working with no other prospect but working still by the month. Talk of working by the month to pay for a farm; 'tis nonsense. As for taking land to the shares, I am of the opinion that could good land be got in that way, something might be made, but nine-tenths of the farms thus obtained are so poor and exhausted that the owners cannot live to the wholes. Good farms are not let in this section.

There is a class of young men that will not farm it for the reason that it is a little too much like work, and if one of them had \$5,000 in cash, would soon put that to the shares, by sharing with livery owners, ball-room company, and waste of time and principle would be his interest laid up.

I can only think that an industrious and energetic man, (and if you will put in calculator all the better,) with \$5,000 to start with, is on the high road to wealth, provided that he be a good manager in farm affairs. What I call a good manager is one that will make his capital pay at least ten per cent profit. I don't call myself the best of managers by any means, but you can figure what the interest would be on my capital of \$500 for 12 years, and also the amount to the present time. It would at 7 per cent be about \$1200, and I must also say that my time would no more than have supported my family at month work or shares. That don't sound like 10 or 12 thousand to my ears. With your permission I may give you some of my experience with crops, &c., in future.

I think there is a great lack of judgment in selecting farms that produce well—a greater want than in most any other one thing.

No one will deny that a young man will be stimulated to action and duty by having a debt before him of a reasonable amount. Some will, to be sure, through good calculation, be able to carry through heavier debts than others; but this does not prove that none others are capable of making cash pay 7 per cent—not by any means. I certainly can cite instances where young men have invested capital and made it pay 20 per cent, but these are rare—in farming I mean.

Finally and fully do I believe that most young men had better own their own land, even if they have to go west and take government land, for I do not think with ACER that tis better to "work for wages or to the shares," than to "own our farm."

There are other considerations why a young man should own or purchase a farm, one of which I will name, *the security of money invested in real estate*; and where do you find security in any thing else? More facts I have in store for those that want them.

G.

Orleans Co. N. Y.

MARKET PEARS.

JOHN MORSE of Cayuga Bridge, who has extensive pear orchards coming into bearing, and who has had experience on a more moderate scale in marketing pears, and in making trials of different varieties, recently informed us, when at a visit at his place, that he placed the *Bartlett* at the head of all as a market variety, which accords with the experience of many others. Next to the *Bartlett* he ranks the *Doyenne Boussock*, a fine pear and a fine bearer, and one that is never subject to the scab and cracking—a malady usually fatal in his orchards, and which has sometimes ruined many otherwise fine varieties. He has retopped many trees with the *Bartlett* and *Boussock*. Next to the latter he ranks the *Flemish Beauty*. These three stand above all the rest. The *Seckel* and *Winter Nelis* would be very valuable, but for their small size and unshowy appearance. He has not tried the *Sheldon* and *Lawrence*, which we think will yet hold a high rank among market sorts.

Experiment in the Culture of Potatoes.

The following method was adopted, to save the labor of covering the seed by hand, and of hoeing the first crop of weeds. The land was plowed and harrowed, and had become fine and mellow. It was furrowed out one way with a one-horse plow, the potatoes dropped in the furrows, and then covered with the plow, leaving a ridge several inches high, over them. As it is nearly impossible to cover them thus at the right depth, some portions being too deep and others too shallow, the whole was buried deeper than they were intended to remain. In about two weeks, when the shoots had grown three or four inches long, and would be about at the top of the ground at common depths, the whole surface was harrowed lengthwise. The earth of the ridges was thrown down to a level, or filled the furrows between the rows; and the new shoots were about at the new surface. It is now about two weeks since the harrowing was performed; the plants are four to six inches high, and the surface is smooth, mellow and clean. Potatoes alongside, having been planted in the usual way, and the surface having not been disturbed since they were planted, are now, at the first hoeing, infested with a crop of weeds, nearly as high as themselves. The new mode has two important advantages;—the covering is done expeditiously with a plow instead of slowly by hand; and the first hoeing and cultivating, or smoothing the surface with the two-horse harrow—is done at less than one-tenth of the usual labor of cultivating with a horse and hoeing by hand. It is quite essential, however, that the land should be mellow and free from large clods.

Present Condition of American Agriculture.

The extension and diffusion of general information, now-a-days, often leads to mistaken opinions on the part of those who do not penetrate very deeply below the surface of affairs. It is not uncommon, for example, to hear some classes of accidents or crimes spoken of as taking place much more frequently than in former times; and this simply because of the greater publicity which every event, however unimportant, is now almost sure to receive in the columns of our newspapers. For the same reason American morals are frequently compared in a most disparaging way, with those of other nations—a comparison based solely upon the fact that we expose to view, and make a “nine day’s wonder” of incidents or misdeeds which elsewhere are entirely disregarded by the public at large, or easily kept from any publicity they might otherwise attain by the influence of interested parties.

The condition of AGRICULTURE in the United States at this time, has been very greatly misrepresented, as compared with past years—and, to some extent, as compared with other countries—partially at least in the indiscriminating way above referred to. Take this State for example: The Census of 1855 was the *first attempt ever made* to obtain the average production per acre of the different staple crops; it became noised abroad that our crop of winter wheat was only ten or eleven bushels per acre, and writers began to draw the most dismal pictures of the exhaustion of our wheat soils, and the impending ruin of our farmers. There was nothing, however, to show that the average yield of the State in any season of similarly disastrous drouth had ever been larger; indeed, there was nothing to show what the average yield had been in favorable years. It is frequently the case that old farmers mention wonderful instances of production as having taken place in their youth, until they and others begin to speak of large crops having been then much more frequent than they are now. They do not form any opinion, however, as to the average over large surfaces or successive periods of years, when the farming of the State was new, and at this time; or, if they are sufficiently observant to have done so, we have uniformly found, by careful inquiry for several years past, wherever and whenever the opportunity was afforded, the opinion expressed that the *productiveness of the State has been constantly on the increase*, and that, with rare exceptions, the same thing may be said with truth, of every county and town by itself. It is true that some of our new lands when first broken up, have produced single crops of wheat which have never been subsequently exceeded; it is true that lands which proved particularly suitable for some one crop, have often been kept under that crop year after year, in a suicidal way, until it could no longer be advantageously produced; it is true, in fact, that we have sadly neglected many of the simplest dictates of reason in our Farming—but it must be remembered that all these facts and faults are now brought into a stronger light than ever before, and while we offer no defence for those sins whereof we are manifestly guilty, we do claim that our error has been—not in constantly growing worse and worse than our fathers, but simply in improving so little upon the example they set before us.

We not only protest, therefore, against all those misrepresentations which allude to large “average crops” in years gone by, and immensely reduced “averages” now, as being entirely without foundation upon any reliable statistics,—but also as having been largely used by interested pretenders to create a demand for their services in analysing soils or making up prescriptions for the farmer and his land. The history of our Agriculture, if it points to one lesson more plainly than another, indicates we believe the entire possibility and the certain profitableness of keeping up and increasing the fertility of the land mainly from the farmer’s home resources; and we could scarcely complain so strongly of efforts to place the farmer of our day in a more disadvantageous light than he

is really entitled to, if they were animated by a really honest desire to promote his greater prosperity in the future.

Another point often alluded to as showing the “decay of farming” among us, is the comparative decrease, or non-advancement, in the population of our rural districts in the older States, while the cities exhibit a steady and healthy progress. Here again there are two important considerations overlooked: In the first place, we can with difficulty estimate the number of those whose absence from farm-labor is fully made up to us in various ways—by the immense numbers of reapers and mowers we now employ, by the use of machinery in thrashing and the substitution of cultivators instead of the hand-hoe, and by the vast saving in the time required to market the products of the farm when it is done by railroad or steamboat, instead of teaming them a score or two of miles over heavy wagon roads, and spending perhaps a week to do what a letter will to-day accomplish by “return of mail.” In the second place, there are many drawn away from the rural districts, who when there never belonged strictly to the *farming population* of the country; the railroads and other influences are constantly centralizing many kinds of industry in the cities which were formerly carried on to better advantage in villages, or indeed at every cross-road. The implements of the farm, from the plow all the way through the list, formerly were made singly by scattered smiths and mechanics, instead of by the wholesale in huge factories; the clothing of the farmer, from his hat to his boots, was more generally cut and put together, if not its very materials manufactured, almost at his door, instead of coming ready-made from distant cities and towns; in fine, access to the great marts has been rendered so easy that much of the trading even has left the villages for more central and important points. In all these ways, the cities have gained at the expense of the *country*—not at the expense of the *farm*; while the farmers have gained all the time in increased consumption and better manufactures at lower prices—and they have more than held their own at the East, we fully believe, against a competition from the West, which at any former period in their history would have been perhaps overwhelmingly ruinous.

These remarks have been suggested by a recent article in the Mark Lane Express, so full of misstatements as to the “alarming decrease” in our production of wheat, and the “large tracts of land” which are here “annually becoming unproductive and going out of tillage and into the wild,” that we could not well notice them each by itself, and have therefore alluded to some of the errors which uniformly lie at the bottom of such misstatements. What, for example, can be farther from the truth than the following:—

Even in New-York State the falling off is very great. Lands that produced a few years back 25 bushels per acre, now barely average 5. In Albany district, lands that formerly yielded from 20 to 40 bushels have sunk to 7½ bushels, and in some counties to five and six. (!!!)

Various statistics are taken to support these statements; those which alone can be regarded as possessing any importance are the Census returns referred to as proving, not only that our exports of breadstuffs decline instead of advancing, but also that our ability to supply breadstuffs in the future cannot be depended upon! How exceedingly unjust it is to attempt the support of such an argument by census returns taken every tenth year, and quite as likely as not to represent very unfairly the nine that preceded it, will be apparent to any thinking man; but the fallacy of the whole is most clearly proven, beyond the shadow of a doubt, the moment we refer to the official returns of our exports as given *year by year*, instead of at intervals of ten years. We have before us as we write these official returns for thirty years, from 1826 to 1855 inclusive, showing the money value of our exports of breadstuffs and provisions for each year by itself; and we have taken pains to ascertain the average for each of the three decades, as follows:—

VALUE OF EXPORTS OF BREADSTUFFS AND PROVISIONS FROM THE UNITED STATES TO OTHER COUNTRIES.		
Average for each year from 1826 to 1835.....		\$12,736,206
do. do. 1836 to 1845.....		14,307,111
do. do. 1846 to 1855.....		38,376,034

Our Agriculture has therefore, in reality, constantly produced, with each succeeding cycle of years, a larger and larger surplus for foreign markets; there can be no doubt that the ten years to be included from 1856 to 1865 will show an increase upon the preceding ten, perhaps even more remarkable than is shown from 1846 to 1855 as compared with the previous decade,—when it will be noticed that the value of our exports of breadstuffs suddenly arose to be almost *three times* its previous average. As to the future, our contemporary need have no apprehensions whatever; the capacity of the country for production, and the increase of its production under a favorable demand abroad, are almost inconceivably great, and we have no fear at present of any privateering force that shall prevent our sending our Breadstuffs in our own ships to any foreign port where we can get a fair price for them.

DESTROYING INSECTS.

We must never expect to be free from the annoyance of insects in the garden, nor of weeds among the plants. But as weeds may be destroyed and prevented from seeding, so insects may be killed and their increase avoided. The soil may be nearly freed from the seeds of weeds, and but little labor be expended in eradicating them; and assiduous care will greatly thin the ranks of insects, and lessen the labor in future. As a general rule, those remedies which consist in *killing* are good; those which merely *repel* are inefficient. As an example, the jarring and killing process for the Curculio, is entirely effectual as far as it goes, as well as the pig and poultry remedy. But fumigations, foul odors, washes, &c., are of little use. We have tried the various prescribed remedies for the squash and cucumber bugs, such as tobacco, ashes, plaster, and various odors, but as yet nothing has been found that will compare in promptness and certainty to a boy with a quick eye and quick fingers, who passes the rounds among them three times a day. Birds should be protected and encouraged, so far as they devour insects, and it is well enough to shoot one occasionally for the purpose of examining its crop, and a little experience of this kind will soon determine which are our friends, like the tribe of fly-catchers, whose crops will probably be found filled with these depredators, and which our enemies, as the cedar or cherry bird, whose crops will contain cherries and other fruits. It is not best to take everything on trust, as many errors are thus received and perpetuated.

GROWTH OF STANDARD PEARS.

A reason that so few of these eminently profitable trees are set out is the time required to bring them into bearing, as they are commonly managed. "He who plants pears, plants for his heirs," applies to those who give them the privileges and treatment of fence posts. In order to show that the tardy progress is not essential and inseparable from pear planting, we have just measured the young trees growing on the grounds of Dr. FARLEY of Union Springs, who says he does not wish his trees to live and grow if he does not take care of them. Young standard pears of leading varieties, set out two years ago, when two years old, and now making their third summer's growth since transplanting, average an inch and a half to an inch and three-fourths in diameter, and seven to eight feet high. Trees set four years ago, and now making their fifth year's growth, are beautiful in form, and two and three-fourths to three inches in diameter, and nine to ten feet high. The pear crop being a general failure this year, they do not bear; but in any good season, we

do not see why trees of this size would not bear a half bushel or more each, with the prospect of a yearly increase.

We lately examined an orchard in another place, enveloped in grass, planted more than twice as long ago, the trees of which were no larger. It had been cultivated a part of the time. With the neglect, first and last, that trees usually receive, it would probably require fifteen or twenty years to attain the size of these five year trees of Dr. Farley's plantation.

SENDING BUDS BY MAIL.

Since the postage law has been amended, so as to allow the transmission of buds and grafts by mail at a cheap rate, many more than formerly will now probably be forwarded in this way. The question is often asked, "How far can you send buds safely by mail?" The answer must depend greatly on circumstances. If cut and put up quite early in summer, while in a green, growing and succulent state, they will scarcely keep in good condition more than a day or two. If, on the other hand, the shoots are well ripened and hardened, they may be kept a week, or even a fortnight. There are some kinds of trees which cease growing by mid-summer, form their terminal buds, and ripen their wood; and on a high, dry, and hard soil, not cultivated, some trees will have matured shoots a month or two sooner than the same kinds on richer and more highly cultivated grounds. From such early ripening trees, the buds may be cut and sent soon.

There are two ways of putting them up—one in oil-silk cases, made by making a water-tight covering of the oil-silk, by wrapping it around the sides and ends, and closing every crack by passing fine thread many times around, until no moisture can escape from within. They cannot therefore dry, and they remain fresh and plump. If dipped in water just before wrapping up, there will be about enough moisture to spare, to saturate the air within. Without this precaution some moisture will escape to the confined air, and the shoots may become slightly shrivelled. Not more than a dozen shoots should be placed within each oil-silk case, as a larger number cannot be securely wrapped. Any number of these cases may be placed in one package, not exceeding eight ounces, and sent by mail for one cent per ounce under 1,500 miles, and two cents, over that distance.

The other mode of packing, is in damp moss, a safer mode, but more expensive, as the moss in which they are imbedded should weigh nearly as much as the shoots. The best mode of all, is to fill all the interstices of the shoots with finely pulverized damp moss, and then encase the whole in thin oil-cloth. The moss retains the moisture, and protects the shoots from bruising, and the oil-cloth prevents the exterior portions from drying.

[For the Country Gentleman and Cultivator.]

To Cure Lice on Calves.

I have used flour brimstone, (sulphur,) rubbing it dry well into the roots of the hair all along the back. The lice will then move to the inside of the flanks and behind the shoulders, where the same remedy may be applied, mixing a little lard with it to make it adhere where it would otherwise fall off. The calves may lick themselves as much as they please; as sulphur is a good alternative, it will prove beneficial. N. B.—I have noticed that every winter that I allowed fowls to roost in the stables, not only my calves but the larger cattle got lousy. RUSTICUS.

[For the Country Gentleman and Cultivator.]

Growing Clover Seed.

I have observed in years past, where clover seed is raised pretty extensively, that many farmers fail to get more than half a crop of seed, and sometimes not even a fourth of a crop, simply because they allow the first crop of clover, which is usually cut for hay, to stand too long before it is cut. (I allude particularly to the early clover.)

In some instances the clover is fed off by stock of some kind until about the middle of June; but, as a general rule, no cattle are allowed to graze in the field in the former part of the season, but the grass is mowed for hay, and the second growth produces the seed.

Now, the idea is to cut the first growth of grass for hay, at that period in the stage of its growth, when the second growth will produce the greatest amount of seed per acre.

Clover (*Trifolium pratense*) will produce only one crop of seed in a season. Now, if we allow it to grow until it has blossomed, and then permit it to stand until the seed begins to form, or until the seed has formed, and some of the blossoms begin to turn brown, we cannot reasonably expect to have much of a crop of seed, the next time the clover is cut. Why? Simply because the energies of the plant, for the present season, and the seed-producing substances have been too much exhausted to mature another crop the same season. Therefore, when clover is allowed to stand until all the blossoms have become fully developed, a portion of them will have begun to change their color, and to mature their seed; and all the seed that is formed and partially matured in the first crop of clover, will be the means of diminishing just so much the amount of seed of the second crop.

This will explain the mystery to some farmers, why they sometimes get barely enough clover seed per acre, to pay the expense of getting it out, even when there is a heavy burden of straw, and an abundance of large heads. There is usually too much anxiety to get a good crop of hay, and afterwards, a crop of seed. But it is better to be contented with less hay in the first crop, and have more seed in the second crop, than to lose a dollar's worth of seed for a dime's worth of hay.

These considerations teach us the importance of cutting clover in good time, when the second crop is designed for a crop of seed. There is not much danger of cutting it too early, but there is great danger of allowing it to stand so long, that the second crop will be all straw and heads, and little or no seed.

I believe when clover is pastured off in June, instead of being mowed—which is the practice of many farmers—that the same ground will produce and does produce much more seed per acre, than when the first growth is mowed. I know this has been true in seasons past, on my own farm, and also on adjoining farms, so far as I have made observations on this subject. Allowing the first crop of clover to stand only a few days too long, will make a vast difference in the amount of seed per acre of the second crop.

Three years ago, I had two pieces of clover as nearly equal in every respect, as we could perceive; and one piece was cut for hay before all the heads were in blossom, and before any of them began to turn brown; and the other was allowed to stand five days longer, before it was cut. In the fall, when we came to cut the clover again for seed, it was about as good in one piece as in the other, so far as large heads and stalks were concerned. But, when we came to examine the heads for seed, we found, that the heads of the first piece were well filled, while those of the piece which was mowed after some of the first crop of heads began to turn brown, had not seed enough in them to pay the expense of getting it out, and therefore, we simply made hay of it.

This lesson taught me the importance of cutting the first growth of clover before it has fully blossomed out, when the object is a crop of seed in the second growth. It will be green as the very grass, and succulent as green buckwheat straw; but we will be sure to get more seed

in the next crop, by cutting it thus green, than if it is allowed to stand longer.

Saving Timothy Seed.

Every farmer who would keep his farm free from foul weeds, such as daisies, fleabane, and such like noxious weeds, must raise his own grass seed. There is, no doubt, much pure timothy seed carried to market for sale; but, as a general rule, the greater part of it has more or less seed of noxious weeds in it. I am acquainted with many farmers who almost always allow their grass to stand until it is dead ripe, before it is cut, so that they can save all the seed, and such farmers usually have a vast amount of the seed of noxious weeds in their timothy seed. Of course this is mingled with good seed at the market, and the whole of it is sold for pure seed.

My own practice in saving timothy seed may, perhaps, be of some little benefit to those who may be at a loss to know how to perform this job with the greatest facility and dispatch. July is the best time to attend to this job.

I select an acre or two, where the timothy is the best and tallest, and where the heads are longest, and if there are any noxious weeds, improve some leisure hours in pulling or cutting them all out. When we come to cut it, if a single weed has escaped notice, let it be taken out at that time. Allow the seed to stand until about two thirds of the heads have turned to a brown color.

The usual practice is to let timothy stand until it is dead ripe, and will nearly half shell out when it is being harvested. Of course, when it is allowed to stand so long, the leaves and stalks are all dried up, and are nearly worthless for fodder. But when the heads have simply turned brown, the feed is fully matured; and if it is cut then, but little of it will be lost by shelling, and the stalks and leaves will make, sometimes, tolerable good fodder, especially if it is run through a straw-cutter.

The Way to Harvest Timothy Seed.

I have been accustomed to practice several different ways of gathering timothy seed, being influenced by circumstances.

If the timothy was very tall, and not too heavy, we cut it with a grain-cradle, cutting it as high as practicable, after which it was raked and bound, and set up in long shocks, and allowed to cure about three or four days—according to the state of the weather—when it was hauled to the barn. The stubble was then cut close to the ground for hay. Sometimes when the bottom of the grass was not very thick, we cut it with a machine close to the ground, and leave it in small gavels for a day or two, if the weather was favorable for making hay, when we would turn them over, and stir them up a little, and then bind them, and as they were cured they were hauled to the barn, and not put into a large solid mow, but spread over a large surface, so as not to injure the vitality of the seed.

Another way, which has been my most uniform practice, is, to mow the grass with a scythe, as soon as the seed is ripe enough to be cut, and allow it to remain about one day in the swath, just as it was mowed; and the next day, if the swaths were rather thick and heavy, we would turn them upside down, by running a long fork handle, or a smooth light pole, under the swath near the tops of the grass, and turn it over bodily. Should there be some very thick and green bunches in some places, they should be stirred up, so that the whole would dry out in a day or so if the weather were favorable. As soon as it is cured, we would bind in small bundles, and shock it and allow it to cure for several days, when it may be stacked or put in the barn.

Most farmers allow their seed to remain too long in the field after it is cut. The seed is very small when compared with kernels of cereal grains, and consequently does not require as long time to cure. As soon as the straw is well cured, there will be no fears about the seed.

How to Mow Timothy Seed.

When farmers were accustomed to cut all their grass by hand, it would hardly seem necessary to pen anything about handling a grass-scythe; but good mowers, at the

present day, are not very numerous among farm-laborers. This is my apology for alluding to this subject in this way.

When we mow timothy grass for seed, it is very desirable to have it all laid evenly and straight, as if it had been cradled, so that we can bind it. In order to do this properly, a man must be not only a good mower, but he must have the knack of fetching his scythe around at every clip in such a manner that his swath will not be tumbled over and over, as it sometimes is when we mow grass for hay. It is almost impossible to give the necessary directions on paper how to do it; but we will try:

In the first place, it is very important to "point in" low. This must be done by dropping the entire scythe, from heel to point, flat on the ground, and keeping the heel down on the ground through the entire clip or sweep of the scythe. Another thing is, the workman must not cut as wide a swath as when mowing grass for hay, and he should "point in" farther forward than when it is not desirable to lay the swath; and as he fetches his scythe around he should give his left hand a sudden jerk when the scythe is near the last part of the clip, and bring his left hand, with the swath, almost behind him, and not raise the heel of the scythe while the scythe is cutting. By giving a sudden jerk with the left hand, and keeping the heel down, the butts of the grass will be drawn inwards towards the mower's feet, and if every clip is made with care, and with about the same sweep of the scythe, and with the same amount of force, a mower will soon learn, if he watches closely the manner in which each clip falls, how to fetch his scythe around so as to lay a swath very evenly and straight.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

THEORY AND ART OF BREAD-MAKING.

ENS. CO. GENT.—In your issue of the 23d of May you have given us a short notice of Prof. Horsford's pamphlet on the Theory and Art of Bread-Making, in which you justly remark that "he has evidently devoted much attention to a very important subject."

A few weeks since I received from Prof. H. a copy, which I have perused with a great deal of interest, because the subject of bread-making and bread eating is one that comes home to the bosoms of all.

The book contains thirty pages, and it would be well if every family could be supplied with a copy, because it contains many important scientific and practical facts relative to the "staff of life," (as some one has termed bread,) that there is reason to believe are not generally so well understood as they should be; therefore the importance that all interested in bread-making should make themselves familiar with the contents of the pamphlet by procuring a copy, and making themselves acquainted with the scientific and economical facts there communicated.

With well executed engravings he gives many figures, showing the composition of the wheat grain or kernel, and the actual location or deposit of the important constituents of the kernels of grain, viz., the phosphates, the gluten and starch. From the location of the phosphates in the grain of wheat it appears that most of them are in the bran, and but a mere trace, as it were, in the fine flour. These figures explain why the chemist Mayer found fourteen times as much phosphoric acid in commercial bran as he found in commercial superfine flour; and these figures also show why the bread made from Graham flour (unbolted wheaten meal) is so much more healthy and nutritious than bread made from the best superfine flour. The Graham bread contains all the gluten as well as starch of the grain. All the phosphates and nitrogenous compounds of the grain enter into the bread when the bran is not separated from the flour, instead of a small fraction only, as in bread made from superfine flour. But habit, custom and fashion are so strongly fixed, that Graham bread will not soon come into extensive use among our people, however much more healthy, nutritious and economical it may be over bread made from the best superfine flour.

"Of all the salts taking part in vital processes, the most important are the phosphates. They enter into the composition of the bones, the muscles, the nerves, the brain, and in-

deed of every higher tissue; and whenever an important function is to be performed, there nature has supplied a store of phosphates. Aside from the great prominence now given by the medical world to the use of the various forms of soluble hypophosphites, it is well known that finely prepared phosphate of lime, eaten as such, greatly aids the growth and firmness of bones and teeth. Fractured bones are reunited much more promptly upon a diet into which pulverized bones enters as a prominent constituent.

"Food, otherwise unobjectionable, is frequently deficient in these (phosphatic) ingredients, and the effect of living too exclusively upon such imperfect diet, is conceived to lower the tone and diminish the vigor of the system as a whole. On the other hand, it has been suggested that pioneers and early settlers owe the prominence of the osseous system, and the accompanying hardihood they so uniformly display, in no small degree to the abundant phosphates supplied by the virgin soils to the cereals and meats that constitute their food. This suggestion derives strength from the circumstance that the effeminacy of many Oriental nations is the concomitant of a diet which is relatively deficient in phosphates.

"This demand of the system for phosphates is illustrated in the well-known relish of many of the inferior animals for bones. Cattle, grazing in inferior pastures, eat ground and other bones with avidity.

"Bread made from superfine wheat flour is deficient in phosphates." To make up this deficiency of phosphates, is one of the important results of Prof. Horsford's discovery in bread making. "The phosphoric acid is prepared from the only practical source of it, the bones of beef and mutton. They are boiled, then calcined, after which the lime is in a great measure withdrawn by the action of a stronger acid, and the phosphoric acid, as an exceedingly acid phosphate of lime, extracted by leaching. The extract is then concentrated by boiling, and mixed with bi-carbonate of soda, which is bottled in the form of a fine whitish powder, ready for use, with printed directions," &c., &c.

In the pamphlet the Prof. goes into the scientific and practical facts, connected with the several ways of bread-making—but one needs the entire book to understand the subject in all its bearings. I presume any one wishing further information in this matter could obtain a copy of the work, by forwarding to the Professor's address, ten or twelve cents in postage stamps.

Advantages of the New Method.

Among the advantages which the new method of making bread presents, are:

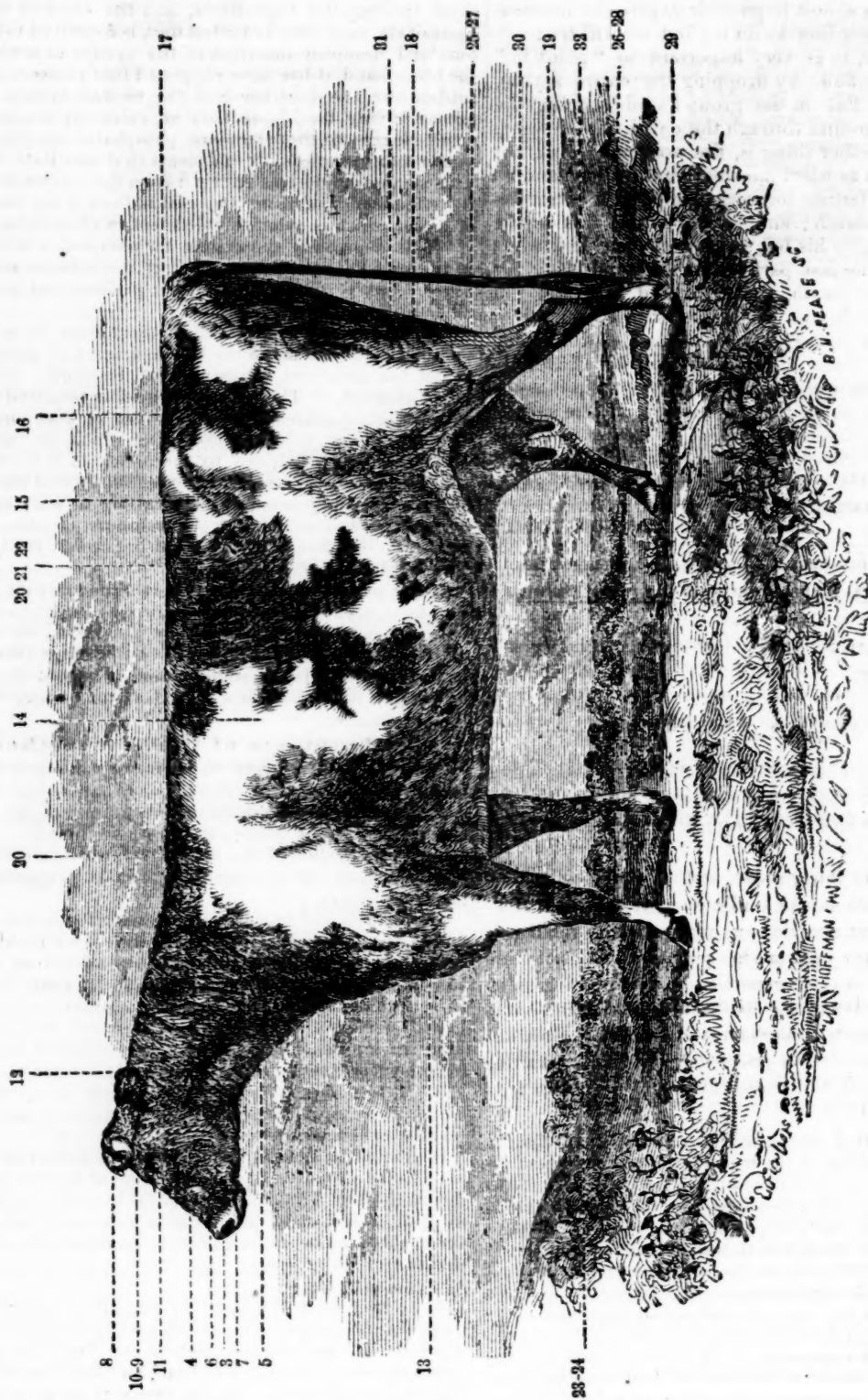
1. Its saving of the nutritious constituents of the flour from consumption in the process of raising the bread.
2. Its restoration of the phosphates, which are in larger or lesser measure removed with the bran in preparation of the finer qualities of flour.
3. Its saving of time; while ordinary fermented bread involves as a general thing, preparation over night, care for several hours before baking, and dependence on a variable supply of leaven or yeast, the phosphatic bread is prepared from the flour for the oven in a few minutes.
4. It secures a uniformly excellent result, while the result with the process of fermentation is of doubtful issue, and in household production is more frequently indifferent than good.
5. It furnishes a bread that retains its moisture much longer than equally porous bread, and does not mould as readily as fermented bread does.
6. It provides a bread, from the use of which even by persons of delicate digestive apparatus, none of the ills peculiar to fermented bread follow. It may be eaten warm with impunity, while with most persons it is necessary that fermented bread should lose its freshness, or become stale, in order to the destruction of some objectionable qualities before it may be eaten with safety.
7. It is a method which, by providing agents of known quality and strength, reduces the measure of skill required to a minimum; and secures, with a very small degree of care and moderate expenditure of time, uniformly excellent bread. The time required for a single person to prepare four loaves of a pound each, does not exceed five minutes, and the baking takes from thirty to forty-five minutes.

Having recently experimented in my family, in bread-making with Prof. Horsford's "yeast powders," we feel assured the preceding statements of this new method of bread-making are not overdrawn, and hope many others will give the method a fair trial.

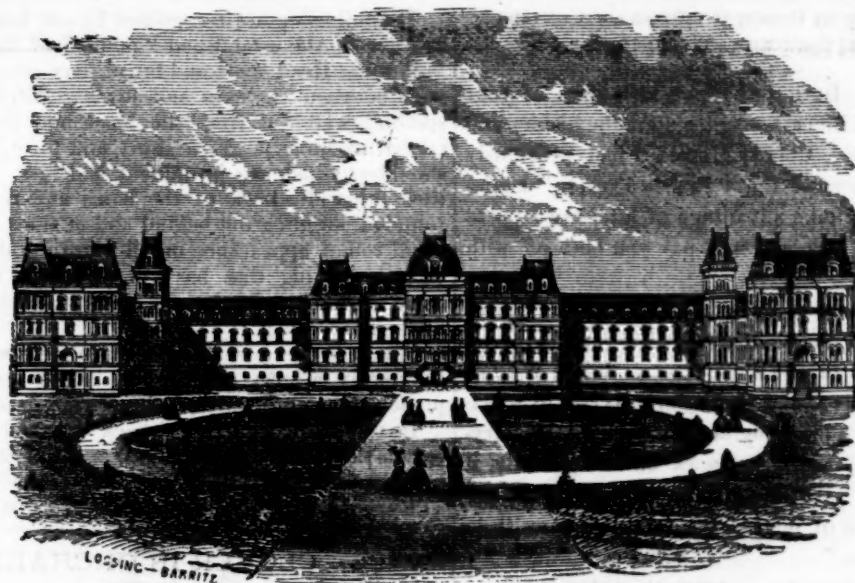
L. BARTLETT.

Warner, New Hampshire.

The Susquehanna Valley Ag. Society holds its Fair at Unadilla (N. Y.) Sept. 26, 27.



THE PERFECT JERSEY COW. (See next page.)



THE VASSAR FEMALE COLLEGE.

We have heretofore mentioned in the COUNTRY GENTLEMAN the munificent endowment by MATTHEW VASSAR, Esq., of Poughkeepsie, of an Institution bearing his name, designed, in the language of its charter, "to promote the education of young women in literature, science and the arts." Generously devoting a princely portion of his fortune, over *four hundred thousand dollars*, to the advancement of this design, the first steps toward its organization were taken several months ago, and now the ground has been broken and the contracts entered into for the erection of the College Building.

We are indebted to Mr. Vassar for the foregoing illustration, showing the design adopted for this edifice:

It is to be of brick, with stone trimmings, three stories high, with a Mansard roof. The length of the front, including the wings, is 500 feet. The wings each 56 feet wide—165 deep. Depth of center, 171 feet. It will contain a chapel, library, art gallery, lecture and recitation rooms, the President's house, and two double houses for

four Professors, apartments for lady teachers, matrons, and the steward's family, and will accommodate 300 young ladies, each with a separate sleeping room. The building will be heated by steam, lighted with gas, ventilated in the most perfect manner, supplied throughout with an abundance of pure, soft water, and nearly fire proof. The cost of the structure will be about \$200,000. The grounds given to the college (200 acres) are about one mile distant from the eastern limits of the city of Poughkeepsie.

The Chairman of the Board of Trustees is Hon. WILLIAM KELLY; and the other members of the Board are gentlemen in whom, like Mr. KELLY, the public will repose the most entire confidence. The President of the College is MILO P. JEWETT, who is to visit, during the current year, several of our Colleges and Universities; and he will, especially, study the systems adopted in the best Female Seminaries of the country, with a view of availing himself of all that is excellent in our most approved institutions.

THE JERSEY COW.

The portrait of a Jersey cow, on preceding page, drawn by Col. LE COUTEUR, was, with the annexed 'Scale of Points,' adopted by the Royal Jersey Agricultural Society as the guide for the judges in awarding premiums on cattle:

SCALE OF POINTS FOR COWS AND HEIFERS.

Article.	Points.
1. Pedigree on male side.....	1
2. Pedigree on female side.....	1
3. Head—small, fine and tapering.....	1
4. Cheek—small.....	1
5. Throat—clean.....	1
6. Muzzle—fine and encircled with a light color.....	1
7. Nostrils—high and open.....	1
8. Horns—smooth, crumpled, not too thick at the base, and tapering, tipped with black.....	1
9. Ears—small and thin.....	1
10. Ears—of a deep orange color within.....	1
11. Eye—full and placid.....	1
12. Neck—straight, fine, and lightly placed on the shoulders.....	1
13. Chest—broad and deep.....	1
14. Barrel—hooped, broad and deep.....	1
15. Well ribbed home, having but little space between the last rib and the hip.....	1
16. Back—straight from the withers to the top of the hip.....	1
17. Back—straight from the top of the hips to the setting on of the tail, and the tail at right angles with the back.....	1
18. Tail—fine.....	1
19. Tail—hanging down to hocks.....	1
20. Hide—thin and movable, but not too loose.....	1
21. Hide—covered with soft and fine hair.....	1
22. Hide—of a good color.....	1
23. Fore-legs—short, straight and fine.....	1
24. Fore-arm—swelling and full above the knee, and fine below it.....	1
25. Hind quarters—from the hock to the point of the rump long and well filled up.....	1
26. Hind legs—short and straight, (below the hocks,) and bones rather fine.....	1
27. Hind legs—squarely placed, and not too close together when viewed from behind.....	1

28. Hind legs—not to cross in walking.....	1
29. Hoofs—small.....	1
30. Udder—full in form, i. e., well in line with the belly.....	1
31. Udder—well up behind.....	1
32. Teats—large and squarely placed, being wide apart.....	1
33. Milk veins—very prominent.....	1
34. Growth.....	1
35. General appearance.....	1
36. Condition.....	1

Perfection, 36

No prize shall be awarded to cows having less than 29 points.

No prize shall be awarded to heifers having less than 26 points.

Cows having obtained 27 points, and heifers 24 points, without pedigree, shall be allowed to be branded, but cannot take a prize.

Three points, viz.: Nos. 30, 31 and 33, shall be deducted from the number required for perfection in heifers, as the udder and milk veins cannot be fully developed; a heifer will therefore be considered perfect at 33 points.

Col. LEWIS G. MORRIS, after several years' retirement from the prominent position he so long and ably occupied as an importer and breeder of Improved Stock, is once more able to spare a limited number from his private herd of Short-Horns. An Advertisement of this fact in another part of this paper, will at once attract the attention of Col. M.'s old customers in every part of the country—all of whom may not heretofore have been aware that the Colonel has never wholly given up his favorite pursuit, but, during the period since his final sale, has been devoting no little attention to the management of a "select few,"—the results of which care, we need scarcely say, would not be offered to public notice if they were not such as to do credit to the long and large experience of their owner and breeder.

[For the Country Gentleman and Cultivator.]

"THE CHESTER WHITES."

MESSRS. EDITORS—During the late visit here of your L. H. T., I promised him a few notes upon the history and points of our Chester County Hogs. I had previously given our friend Emery of the "Prairie Farmer," a similar promise, and now take advantage of a leisure hour to redeem these obligations, and will pay you both off with the same "notes."

In this ancient county of ours, for half a century past, the fancy of some of our best farmers has run very decidedly in the direction of *fine hogs*—just as JONAS WEBB'S inclined to South-Downs, and the Messrs. BATES' to Short-Horns. Our county, too, being largely devoted to dairying, and consequently to feeding pork on a large scale, it has been a matter of great moment to us to find out the most profitable breed of hogs. We think we have it in our "Chester Whites."

I learn from Mr. FRANCIS STRODE, an extensive dairy farmer of this county, who has been many years engaged in raising and sending abroad this particular breed of hogs, that his father, the late Richard Strode, commenced a half century since to pay close attention to improving his stock of hogs, (since persevered in so successfully by his son,) and that by judicious crossings through a series of years, and a careful selection of choice animals to breed from, our Chester hogs have attained their present valuable properties, and established certain unmistakable and characteristic "points" of excellence and recognition. Others of our farmers than the Messrs. Strode have been laboring diligently to the same end these many years past. I merely mention their names as a matter of reference and authority, and as among the earliest growers of this stock. There is little doubt, I think, that our Chester whites have descended from improved foreign stock—the Berkshires,* most probably, from their resemblance in some of their points—and yet we have improved so decidedly upon the Berkshires in many important respects that some of our breeders deny the paternity in toto from that source.

As a matter of course, in the great "Swinish multitude" within our county limits, there are numerous "grades" of these animals claiming to be the "Chester Whites," which, though frequently very creditable specimens, are decidedly inferior to the stock of the Messrs. Strode and others of our most careful breeders. It is important, therefore, that persons at a distance, ordering this breed of hogs, should apply to parties of known reliability in the matter.

Among the important characteristics of this breed of hogs, is its remarkable aptitude to fatten at any age, and without being fed on grain. On good pasture, with the ordinary "slops" from the kitchen and dairy, the Chester will at all times keep sleek and fat,—in fact, our farmers frequently have trouble in keeping their breeding sows in sufficiently low condition when running to pasture, with nothing but pure water to drink. With this aptitude to fatten, we claim for the Chesters, *that they will produce more pork upon the same amount of food than any other breed*, consequently, they are more valuable and profitable to the farmer, than any other breed. A genuine Chester, when well cared for, will gain on an average one pound weight per day till two years old, and has been known to reach one thousand lbs. at that age and over. We do not consider it desirable, however, nor is it profitable to attempt to reach this great weight. From 300 lbs. to 400 lbs. weight makes the best pork, and a well fed Chester is sure to make this weight at from nine to twelve months old. At eight weeks old—which is the proper age for shipping, and they should never be sent abroad earlier—our shoats measure about thirty inches in length and weigh about fifty lbs.

* Our friend Paschall Morris of Philadelphia, traces the Chester County Whites back to the importation of a pair of Bedfordshire pigs—See CO. GENT., vol. xvii, page 268. EDS. CO. GENT.

The following are recognized by our best breeders here as some of the established "points" of this stock:—

FORM.—Head short and broad, face somewhat dished—wide between the eyes and jowls. Ears fine and thin, standing well out from the head, and pointing forward, (never drooping.) Neck short and thick, well set on the shoulders which are prominent and full. Sides carrying their full width back to the hams and rounded. Hams rounded, swelling out behind and at sides, and presenting a full round appearance on all sides. Back straight and broad. (A pig that has low shoulders or sinks in the back, should at once be rejected as a breeder,—it is only fit for the butcher.)

COLOR.—Clear white and when well washed presents frequently a silky appearance. (The least spot, or approach to a sandy color, indicates a "grade" animal.

HAIR.—Soft, thin on the back and belly, more thickly set on the sides, and frequently a little curled.

Bones small and fine. **Tail** fine, tapering and curled. Chester Co., Penn. A CHESTER COUNTY FARMER.

CLOVER IN ORCHARDS.

Is it true that clover is worse for young trees than other grasses, as is commonly supposed? B.

Clover is probably more detrimental to the growth of trees, young or old, than any other crop. The roots of common grasses extend downwards but a few inches, as every plowman is aware who inverts sward. Consequently, grass is not so injurious to old orchards, where the roots of the trees have extended downwards two or three feet in the subsoil (as ditchers may often have observed,) as to young trees, the roots of which are near the surface. But the roots of clover extend deeply down; our readers may have observed the statement that President GEDDES, at the late meeting of the State Agricultural Board at Watertown, exhibited clover roots that had run down three feet eight inches, and were then broken off. When a crop thus throws its roots through every portion of the soil and subsoil that is occupied by the roots of trees, the result must be many times more injurious to the latter, than when the mere surface is covered. We must not be understood as approving the occupancy of young orchards by crops of grass, which so much checks the growth of the trees, and often proves their destruction.

[For the Country Gentleman and Cultivator.]

Striped Melon-Bug.

I found this insect was destroying most of my Honolulu and Hubbard squashes—20 or 30 of them could be killed on a hill. Early in the morning they are clumsy and were easily destroyed; but before night they appeared in undiminished numbers. It was too late to try the radish or onion remedy. I had a little soot, which did good as far it went, sprinkled about the plants; but on the principal part of the patch I applied sawdust pretty well impregnated with Kerosene oil—say half a pint to a peck of sawdust, and was much pleased with its action. I thought it might be worth noticing, as the knowledge of a variety of remedies is desirable—sometimes one and sometimes another being accessible. S. A. Yardville, N. J.

SEEDING WITH CLOVER AFTER CORN.—The writer has been in the habit for several consecutive seasons, immediately after the last hoeing of corn, (which has been cultivated as level as practicable), of sowing clover seed by going between each row one way, and carefully scattering the seeds under the leaves and stalks at the rate of 15 lbs. to the acre, and usually with good success. The corn seems to shade the seed sufficiently to protect it from the too powerful heat of the sun, and if the land is in good tilth, a good catch is secured for pasturing or plowing under.

Salisbury, Conn.

W. J. PETTEE.

BUTTER MAKING.

Of all the butter which goes to market from this State, not one-fifth is strictly a prime article, and of that fifth probably a half may be deducted for a not perfectly pure article. Indeed, so limited is the section where the very best butter can be produced, that I doubt whether the estimate is not even now too high.

Over a large portion of the State good butter, for immediate consumption may be and is made, but it will not bear transportation. The best butter is made in Delaware, Sullivan and Greene, upon the brown shales of the Catskills. The next best is made in Lewis, Broome, Tioga, Chemung, Cortland, Cattaraugus, Steuben, Chautauqua, Jefferson, St. Lawrence, Alleghany, Chenango, Herkimer and Oneida; and in these counties the best comes only from the hilly and mountainous regions which have been longest in pasture. Upon the old and rocky pastures of Putnam, Dutchess, Columbia, Rensselaer and Washington, good butter is produced, but as a general thing it will not compare favorably with that from the west side of the Hudson river. Short, sweet herbage, which only grows in perfection upon old pastures in hilly or mountainous regions, pure air, and soft pure water, are the indispensable requisites for pure butter. All these, however, without the skillful manipulations of the dairy woman, will avail nothing.

The dairy woman cannot do her part well if she do not have the advantage of proper fixtures and implements. A good, cool place for setting the milk in summer is absolutely indispensable, and there is no farm where cows can be kept profitably, that such a place cannot be provided at small expense. The use of spring houses is one of the causes for the good butter of the hilly regions. But a good *spring* house can be made near a well, and oftener much more convenient, as being nearer the house than the spring. I saw a very nice one, which answered an admirable purpose, and is a model of its kind. The ground was excavated about four feet by some twelve feet square, and a solid stone wall two feet thick, laid in cement, four feet high. The floor inside was also laid in cement, slightly inclining to one corner. The wall was carried up full width four feet, and then an offset of 18 inches was made to the rear, carried up two feet higher, and connecting with the wall to form the foundation. Upon this foundation was erected a balloon frame with eight feet posts, boarded outside and in, and the wall made as tight as possible. Upon the ledge created by the offset a wall about four inches high and wide is made on the front, by which, being well plastered with the cement, a gutter or vat is made some three inches deep, with a slight descent to the corner opposite to that where the water is introduced. Into this vat the fresh milk is set while warm, and cold water conducted into it from the well. The milk cools rapidly, and a low temperature is maintained through the day or night. At each milking the pans are removed to the shelves to make room for the fresh milk. Some very nice dairy houses are rigged up entirely above ground, and one I saw last summer in the town of Solon, Cortland county, was so arranged that it seemed almost as good as a spring-house. In that and many others, I noticed the pans were set upon shelves made by turning two narrow boards edgewise, so that the least possible surface was kept from the air. But much of this expense and trouble may be saved if the practice of churning the milk instead of the cream be adopted.

Butter makers seem to be divided into two classes upon this question of churning the milk or only the cream. By far the largest number in this country churn the cream, while in England, Scotland, and a good part of Ireland, the milk is more generally churned. Carefully conducted experiments have established the fact that there is a gain in quantity where the milk is churned, of full seven per cent. over the yield from the cream alone. In small dairies the quality must be much improved, for by churning the milk the risk of tainted cream is avoided. Some of our best premium dairies churn the milk. The most common objection made to churning the milk is the labor; but power (horse, dog, or sheep,) is now so cheap that the

objection has but little force, as compared with the increased quantity and improved quality. Where water power cannot be had, sheep power is preferable to dog power for small dairies; horse or steam for large ones.

The condition of the cream or milk when churned is of the highest importance, for upon that depends the value of the butter. If tainted in the slightest degree, no good butter can be obtained. Everything about the dairy must be sweet and pure. Pure air is as essential as pure water, and as much butter is spoiled by foul air where the milk is set as by any other cause. Many a dairy woman has wondered why her butter was not so good as her neighbor's; she had just as good cows, and was quite sure she took as much pains and knew how to make good butter. Her mother always had good butter, obtaining the highest market price, and why she did not also get the best price was a wonder. Her father probably was a very neat man, and did not have his hog pen just under the window of the milk room, the privy on one side and the sink hole on the other. Hundreds of farmers lose from five to ten cents per pound upon all their butter by a neglect of the most obvious rules of neatness, and then blame their wives for the fault of their own shiftlessness. Then again there are great numbers of farmers that water their cattle at some slough hole of stagnant water, and then wonder that their butter is not of the best. Let no man look for good butter who has not pure water, and sweet, good herbage for his cows, and pure air in and around his milk room. T. C. PETERS in *Rural New-Yorker*.

[For the Country Gentleman and Cultivator.]

Killing Smut in Seed Grain, &c.

On reading the article with the above heading, on page 257, vol. 17, Co. GENT., it occurred to me that my remedy was much less troublesome. I give it as follows:

Wash the grain thoroughly with water two or three times; swim off as much of the lighter seeds, (oats, &c., if there be any,) as I can—drain off the water; then put in four to six quarts strong brine to the bushel; stir it well; then add enough slacked lime to absorb the moisture, and to keep the kernels from sticking together after it is well stirred. It will be as well to let it stand a day or two in the brine before the lime is added, or it may lie two or three days after the lime is put in, without injury, if it is stirred once or twice a day; but I most generally prepare it and sow it as soon as I can.

The above is my plan for preparing seed wheat. I have practiced it for several years, and I have never known a crop of wheat to be smutty, raised from seed thus prepared. I once bought some very smutty wheat for seed, and prepared it as above, and had a fine crop, while the man I bought of, sowed the same kind without preparing it, and had very smutty wheat. D. G. WILLIAMS.

EARLY CUT HAY FOR MILCH COWS.

A writer in the *Dairy Farmer*, is of the opinion that for milch cows, clover hay should be cut as soon as it fairly begins to bloom. It contains then, he says, "a greater per centage of starch, gum, sugar, and fat, especially yellow fat;—after it has passed the bloom it has a greater per centage of flesh-forming material along with woody fibre and mineral matter." The former gives more of fatness, the latter more muscle—hence later cut clover is best for working horses. Experiment proves the superior value of early cut hay for laying on fat, or increasing the milk product of cows or ewes with lambs, and it is found that it is better to begin haying even before the grass gets its full growth, than to delay long after blooming.

Messrs. D. APPLETON & Co., New-York, send us Vol. 12th of their *New American Cyclopædia*. This carries in the alphabet from *Moz* to *Par*, and maintains the character of its predecessors for the scrupulous care manifested generally by its Editors and the acknowledged ability of its large corps of contributors. Frank H. Little is the Publishers' Agent in this city.

The Agriculture of Chester County, Pennsylvania.---III.

Dr. GEO. THOMAS of Oakland, where we closed our last week's notes, has a farm of 500 acres, of which there are 250 under cultivation. He has underdrained quite extensively—some parts of the farm requiring relief from surplus moisture to a greater extent than is common in many other parts of the county. The other points of most agricultural interest here, were—the dairy of thirty cows, all of them, I believe, Alderneys or Alderney grades, and the flock of South-Down sheep, which latter we did not see. At the spring-house we found about a hundred and fifty pounds of butter awaiting a market, made up in the stamped *pats*, or *prints*, of an exact pound each, as is the uniform custom with all butter sold at Philadelphia, and presenting the neatest and most delicious appearance conceivable.

The ornamental grounds about Dr. T.'s residence receive no small share of his attention. A grapery forty feet long had a very convenient contrivance for obtaining air, much simpler than sliding sash, consisting of a kind of trap-door arrangement opening from below to a width varied with the amount of air it is desired to admit, and preventing rains from beating in upon the vines themselves. I could not make a description very clear without the aid of a diagram, and had better not attempt it here. In an orchard-house we found peaches, apricots and nectarines rapidly approaching maturity. There are some fine and rare trees standing in the lawn, and a little sheet of water below the garden floats a row-boat and furnishes a considerable supply of fish. The kinds of Strawberries grown by Dr. T. are the Hooker, Wilson's Albany, Triomphe de Gand, Peabody and Vicomtesse Hericart de Thury—no other one of which is found to compare with the Wilson's Albany for productiveness and size of fruit, although retained for superiority in quality.

We have so much ground to go over, that we must of necessity be very brief in these notices of individual visits,—a fact which I mention in connection with "Oakland," with much regret, for at no point at which we called were there more features of general interest, if the space to refer to them all particularly could be commanded. Uniting a great taste for Horticultural pursuits with the successful management of so large a farm, Dr. THOMAS has brought his estate into a condition having probably few, if any, parallels in the county, as regards a combination of both the beautiful and the useful, in Rural Life.

Proceeding thence up the Valley, we noted from our carriage, a remarkably good wheat-field of 20 to 25 acres on the farm of Mr. THOS. DOWNING—*perfectly clean*, and with heads thick and plump enough to yield perhaps 30 or 35 bushels per acre; and, at a distance of about two miles from Oakland, called at the residence of RICHARD I. DOWNING, Esq., who has been devoting himself for a year or two past, to the management here of about 700 acres of land, of which there are three or four hundred tillable. Like a part of Dr. THOMAS' farm, this is in the limestone region, but the application of that mineral makes the wheat and grass turn out none the less famously on this account we were assured; and the grains we saw growing here, particularly a field of 44 acres partly in barley and partly in oats, and one of about 20 acres in wheat, were coming on excellently well. The cultivated fields were all very clean and tidy. Mr. D. makes no butter for sale, but grazes 60 to 70 head of cattle for beef, buying

them in the autumn, and generally able to select out of so many, more or less that will repay winter feeding to go to the butcher fat in spring, while the larger part receive hay but no grain during the winter months, and are fattened at pasture the succeeding summer.

Mr. D. burns his own lime, and in passing the kilns we took the pains to ascertain the most approved form and size adopted in their construction. They are of oval form—larger diameter 16 feet, smaller 12 feet, at top—18 feet high, growing wider from the bottom to the top all around at the rate of three inches to each foot ascent—constructed in the hillside so as to have three sides protected by the solid earth, while the front wall is made eight feet or more thick at the bottom, and about five feet thick at top. A flue enters at the bottom perhaps two feet wide and one foot high, which is filled with kindling wood, and covered with a grating; then come layers of coal and limestone in the following order:—

1st layer—	16 bush.	fine coal,	with 13 inches deep of limestone above it.
2d do.	—16 do.	do.	do. 13 do. do. do.
3d do.	—18 do.	do.	do. 14 do. do. do.
4th do.	—22 do.	do.	do. 18 do. do. do.
5th do.	—20 do.	do.	do. 22 do. do. do.
6th do.	—22 do.	do.	do. 24 do. do. do.
7th do.	—25 do.	do.	do. 22 do. do. do.
8th do.	—31 do.	do.	do. 22 do. do. do.
9th do.	—41 do.	do.	do. 22 do. do. do.
10th do.	—47 do.	do.	do. 24 do. do. do.

This is heaping the kiln, and takes four days in burning—consuming ten and a half tons (net) of coal, and yielding about 1,400 bushels of lime, which Mr. D. computes to cost him, for quarrying and all, performing the work as he does with his own teams, &c., only *four cents a bushel*.

Concluding our call at Mr. DOWNING's with the trial of an excellent sample of sparkling bottled cider, we proceeded perhaps two miles farther along the Valley, passing through Downingtown, to the farm of Dr. J. K. ESHLEMAN, President of the Fruit Growers' Association of Eastern Pennsylvania. And here we may take occasion to say that of all the various localities in which the *Wilson's Albany Strawberry* has become a favorite variety, we have never visited any, where it seems more completely to have cast all others into the shade, than here in Chester County. Dr. E. could raise *five*, if not *ten times the quantity* of fruit from it, as from any other kind, with the same care and on the same land; he has tested *sixty-two varieties*, so that he is qualified to speak, and out of them all had determined to retain but *three*—*Walker's*, which he prefers for his own taste, *Burr's New Pine*, and the *Wilson's Albany*. Of the *Wilson's Albany* he had had 28 quarts from a bed containing 60½ square feet; the first year after planting it produces well, the second year still better, the third year about as much as the first, after which new beds are formed. At the meeting of the Fruit Growers' Association of Eastern Pa., in June, 1860, there were 25 votes given for *Wilson's Albany* "for general culture," while the highest received for any other sorts were 8 votes for Horey, and 7 each for *Triomphe de Gand* and *McAvoy's Superior*. At the same session *Triomphe de Gand* stood highest "for special or amateur culture," having 11 votes, while *Vicomtesse Hericart de Thury* (can't some ingenious pomologist propose an abridgment of this formidable name?—how would *Hericart* answer alone for instance?) stood next, having 10 votes.

One is perhaps excusable for overrating the importance of this luscious fruit, precisely at the season when it is in most luxuriant bearing, and in a region that seems peculiarly adapted for its production. It is true that blessings appear to "brighten as they take their flight," and some

one who was asked in our presence which he preferred, the strawberry or the peach, philosophically answered that during the season of either he was quite likely to fancy a preference for *the one that had passed by or was still to come*. But neither the pleasures of memory, nor those of hope, had ever charms for us equal to the delights of realization, as each fruit arrives at its maturity, so only that in quantity it shall suffice; and reverting once more to the question of strawberries, the certainty of a many-bearing kind, the fruits of which, in very bigness as well as abundance, shall enlarge the eyes of those who see, and their solidity endure the handling of those who sell, will go far to counterbalance, to our less fastidious palate, the slightly extra supply of sugar necessary with the Wilson's Albany—at least now that the diminished "tariff" on that commodity has so much reduced its price. Such, we think, is the feeling of Chester county cultivators; certainly of all who grow the fruit for sale.

After leaving the well managed grounds and orchards of Dr. E., whose Chester County pigs, and other stock, we had not had time to look at, we proceeded somewhat farther along the Valley, at length turning to climb Caln Hill, passing the fine farm of the late Richard Pim, and commanding a noble view, at several points, of the landscape below us—thence winding down the North Valley hill by the old Lancaster road—whose course we had been able to descry in the morning from just behind the Oakland Station, eight miles or so away—thus reaching Downingtown by another route. Along Beaver Creek we passed some old "water meadows," where irrigation had been practiced in former times for the purpose mainly of securing the more rapid formation of a thick sod; it was before the introduction of those twin companions in every meadow of modern days, "clover and timothy," and one then had to wait the gradual coming-in of the "natural grasses" at their own good pleasure. Nevertheless we could not but suggest that the grass lands of the present more advanced stage of farming are in reality no less benefitted by irrigation than their predecessors; and it seems a pity that it should not be once more undertaken where the facilities for accomplishing it are so great.

Presently we made a brief stoppage at Mr. W. D. SUGAR's, who is an officer of the County Society, and has an excellent dairy farm, with a substantial Chester County barn, and other note-worthy features. The ice-house and dairy room are conveniently arranged in connection with each other, and the latter was evidently in the full tide of successful operation. Mr. S. uses Embree's patent Butter Worker, and finds it a great labor saver, putting through twenty pounds of butter, in good style, in about three minutes. It certainly looks as though it might bear out the high recommendation he gave it. At the barn Mr. S. has the assistance of water power; he thus cuts the feed for his stock, wets it up, and finds himself well repaid for the extra attention required. He had also tried steaming, I understood, but had not found this process a profitable one. The size of the barn below is 50 by 60 feet, but an addition above gives 80 feet length of floor room. The cellar below is 10 feet high; then comes, constituting the first floor, the stalls for cattle, and the horse stable, 8 feet high; the second floor, also of eight feet height, is occupied by granaries, and bays descending from above; on the third is the thrashing-floor, accessible by a bridge from the hillside without, and, if my notes are correct, it is 22 feet from this floor to the ridge of the roof. The barn

thus contains an immense amount of space, and it is all handily arranged. Among the outside matters we find a pig-pen, the lean-to roof of which, instead of being stationary, was hung upon a pivot connecting the center of each end with an upright in the end of the pen, so that the roof turns to slant towards either north or south, as may be desired; in winter time it slants to the north, and keeps that side of the pen tight against the wind, and the southern side open to the sun, and at the approach of warm weather its position is reversed, with of course precisely the contrary effect. No doubt all animals thrive the better for a reasonable degree of attention to their comfort, and we submit Mr. SUGAR's pig-pen to the judgment of all merciful readers.

The very first sentence in this correspondence alluded to the commodious barns for which Chester county has been famous for many years. The style of "hill-side" or "double-deck" arrangement, adopted here many years ago, has come now to be considered an indispensable feature in a good barn almost anywhere. Instead of attempting a detailed description of any one in particular at present—(I was kindly promised at some future day, the dimensions and details of two or three which seemed particularly comprehensive and convenient,) I may give the following outline, as conveying a fair idea of them all: A Chester county barn will cost from \$2,000 all the way up to twice this sum, but generally runs from about \$2,500 to \$3,000; as already stated, the walls are substantially built of stone; there is generally a main building, perhaps 50 or 60 feet square, with a bridge-way entrance as we saw at Mr. SUGAR's to the thrashing floor in the third story. The doors are all hung with wheels upon a rail above, so as to slide backward; what hoisting there is of hay is done with a horse-fork, and two-horse endless-chain railway powers are in almost universal use for thrashing, &c. The bottom floor, intended for stock, is generally of mortar rammed tightly down, inch by inch, when the mortar is about two-thirds dry. There are very often sheds around three sides, perhaps open through into the barn, both in the basement, and in their upper story, for they generally have a large loft for the storage of straw. The bays in the main building open down from the thrashing floor to the sills above the basement, and the remainder of the space is used for granaries, &c., &c.

From Downingtown to West Chester, we returned by a delightful road along the banks of the Brandywine, at first quite abrupt and precipitous, afterward more undulating, and including grazing lands of great superiority. Here several excellent farms were pointed out to me—among them I remember that of Mr. ISAAC HAYES, a large grazier of premium fat cattle. Another excellent grass farm which we had admired near Downingtown, was that of Col. SAM. RINGWALT, who took the first premium in 1859, on the management of fifty acres; in that year six acres and ten perches mowed the first time with timothy and clover, produced 44,147 pounds of hay, weighed dry out of the field—and ten acres of green grass land, not plowed for 20 years, produced a first crop of 32,670 pounds of "remarkably fine hay," and on the 2d of September were said to be ready for the cutting of the second crop. His account with a piece of pasture land 22 acres in extent, was as follows, aggregating for 24 hours:—

720 days' pasturage of Horses at 10 cents.....	\$72.00
680 do. do. Oxen at 8 cents.....	54.40
240 do. do. Drove Cattle at 8 cents.....	19.20
1,080 do. do. Cows at 8 cents.....	86.40
176 do. do. Young Cattle at 5 cents.....	8.80
1,205 do. do. Sheep at 1 cent.....	12.05
1,680 do. do. Swine at 1 cent.....	16.80

\$269.65

Col. R. stated at the time, that he attributed his successful results "in producing hay, grass, wheat, corn, potatoes and vegetables, to the application of Columbian guano," having applied it on all his land, and for all crops, since the spring of 1856, particularly on grass, applied in November, 1858, at the rate of 250 pounds to the acre. He had devoted especial attention to raising cattle, and selling hay: selling seven yearly at two years old, at from \$35 to \$45, and from 25 to 40 tons of hay.

Another week I shall endeavor to bring my notes to a conclusion.

L. H. T.

The Agriculture of Chester County, Pennsylvania.—IV.

The next morning, June 14th, we started in the direction of Goshen. Our first call was at the farm of Mr. CHARLES W. ROBERTS, who was unfortunately away from home. In going out to see his flock of Cotswolds, to which he pays special attention, I noted the nicely piled manure under his sheds, and other evidences of good farming. The townships of Goshen, east and west, are even more rolling than some other parts of the county, but many of the grain crops we thought equal to those we had noticed in the Great Valley; the corn appeared well along and thrifty, and here and there a field of wheat was very clean and promising. After a little *detour* to get a fair glimpse of this region, passing "Rocky Hill," and remarking hereabouts the occasional walnut trees, which are thought to be an index of good land, we made our next stop at the cattle and fruit farm of Mr. ABRAHAM W. BAILEY, in West Town. His land is well managed and very productive, and he thinks it well calculated for orcharding. Several hundred dwarf pears, now in their third year, and other young fruit trees, would go far, in appearance at least, to vindicate the correctness of this opinion. Mr. B. has a dairy of fifteen cows, and is pasturing about the same number of beeves. Upon a farm of not quite 200 acres, he generally keeps in the neighborhood of 50 cattle, young and old; he has twenty-seven acres under the plow—nine each in corn, oats and wheat—annually breaking up nine acres of grass land in the rotation already described; he mows 20 acres of hay, and calls *two tons and a half* per acre a good crop, although he was looking a little higher, I believe, the present season. His barn is a fit one for such a farm, measuring 56 by 120 feet; after looking it through, we took a stroll into the pastures, which evidently had never suffered from "over-stocking" or neglect, and found the grazing cattle to be a very choice and well grown lot.

We then proceeded to Mr. WELLINGTON HICKMAN'S, passing, before arriving at "Waterloo," his home farm, another farm which he has more recently purchased, and where we noted that in the renewal of the fences, advantage had been taken of the long accumulation of vegetable matter where the old fences had stood, to plow up the materials of a large and excellent compost heap. At "Waterloo" we found 224 acres of land, of which only about 24 acres are occupied by wood, gardens, orchards, roads, &c., in a fine state of cultivation, as will be shown by the crops it has produced. For ten years past Mr. H. has averaged here a crop of 75 to 80 bushels of corn per acre; last year the season was unfavorable, and the crop the smallest of the ten years—being only 960 bushels on 16 acres. As to the total products of the farm in 1860, a little statement with which Mr. H. was so kind as to provide me, will convey a fair idea, and it shows what is considered good farming in Chester county:

THE CROPS.				
14 acres of Wheat produced	420 bushels, at \$1.40.....	\$588		
17 do. Oats do.	1,200 do. 33.....	396		
16 do. Corn do.	960 do. 60.....	576		
Market Value of grain crops on 47 acres.....				\$1,560
42 acres of Hay produced	75 tons, at \$10.....	750		
THE STOCK.				
30 head of cattle, bought at an average cost of \$40 per head, sold for \$77 each—profit on the 30 at \$37.....				1,110
72 ewes, bought at \$2.50, sold with their 92 lambs at \$4.25—profit on a total of 164 sheep and lambs.....				602
Gross product of farm valued at.....				\$4,022

Of course this statement is larger than the actual net return of the farm, as the hay, and probably much of the grain, are counted a second time in the profit on the live stock consuming them. But that does not lessen the value of these figures for purposes of comparison. It will be perceived that the wheat averaged thirty bushels per acre, and the oats a fraction over seventy bushels; and that the money return was \$42 per acre for wheat, \$23.29 for oats, and \$36 for corn, or an average of \$33.19 per acre for the 47 acres in the three grains, which is not by any means an unpleasant result to reach.

With the sheep Mr. Hickman was very successful in the foregoing instance, although not more so I understood than he has been in other cases. Seventy-two ewes were bought in the fall of 1859 at \$2.50 each, as above stated; they were the common sheep that are driven to the eastward from Western Pennsylvania or still farther off, and they brought in 92 lambs the following spring. The whole 164 were disposed of at \$4.25 per head, to go off as wanted from June to September—the fleece being probably worth about a dollar per head, and the remainder of the price agreed upon going for their mutton value. The lambs were sired by South-Down rams, and probably sold the better for this fact—getting greater size, and helping off the ewes at a fair figure all around. The cattle were bought during September and October, and sold in the spring to be taken from time to time during the season. An item that may be stated in connection with the *sheep* is this: Mr. Hickman considers that pasturing the land with them, before breaking up for corn, and then putting a little salt in the hill, together constitute an almost sure protection against the cut-worm.

Mr. HICKMAN'S experience is strongly in support of our frequently repeated theory as to the possibility of adding immensely to the production of the land by a well-regulated system of stock feeding upon it. This farm was awarded the prize as the "best cultivated farm" by the County Society three or four years ago, and Mr. H. then informed the inspecting committee "that since he commenced feeding the large stock which he now winters, his farm is improving yearly, as shown by a largely increased product of hay and grain"—a statement which could probably now be made as truly as it was then. The committee also reported, in language almost precisely the same that I should have now used if they had not anticipated me:—

"The buildings, placed with a view both to beauty and convenience, are in fine order, having most comfortable and inviting accommodation for man and beast. Around the house are various well selected shade trees, a well tended and luxuriant garden, and an abundance of well selected fruit, ample and convenient kitchen and domestic arrangements free from the usual attendant nuisances. The barn is large, having two floors, on the lower of which are granaries, well planned and smooth in their finish, being also lofty, well lighted and airy; adjoining is a roomy wagon-house; above, a large floor for thrashing, with ample mows and straw room; below are well lighted and well ventilated stables for twenty-nine head of cattle, eight horses, and an extensive sheep stable, besides a large and comfortable apartment for harnessing and cleaning horses, while outside is a wide and well sheltered shed—

ding open to the warm rays of the sun; both ends of the yard are well supplied with water, being altogether a most complete, and well arranged farm and barn-yard."

The size of the barn is 58 by 78 feet, with a shed 33 feet deep at the end. Mr. Hickman has now occupied the farm 18 years, during the first three of which he put on 10,000 bushels of lime—an investment which we presume has never failed to pay satisfactory dividends.

From Mr. Hickman's pasture fields we crossed over to see the Alderneys belonging to SAMUEL J. SHARPLESS, Esq.,—including two young cows imported by Mr. S. last August, and one brought over in May, 1858, by Mr. W. F. Potts. Without being quite certain of the identity of each, as there was no one present to act as guide, we can at least pay the general compliment to their appearance, which the beauty and docility of the ones we saw, deserved most highly; and I should not hesitate to rank them side by side with the best importations I have ever seen. On a commanding eminence just above, Mr. S. is just completing a costly and substantial stone mansion, from the terrace around which the view in almost any direction is very fine.

Seating ourselves once more behind the horses, our next stop was with BORROWDALE PRITCHETT, Esq., who had joined us at Mr. Hickman's. He occupies a dairy farm in that immediate vicinity, and we saw enough of it to regret that we had not time for a still longer call. I understood that Mr. P. was now making butter from 30 cows, but for the two years before he has had 35 in milk; in 1860, he made 6,000 pounds of butter from the 35, being an increase of 1,000 pounds upon the gross return of the preceding year, and I found him disposed to make the average per cow still larger hereafter. It is my impression that the amounts mentioned do *not* include the milk, cream or butter consumed on the farm; in 1860 the average was a fraction over 171 pounds per cow per year, which may be considered as doing pretty well. Mr. P.'s "barn is large and convenient, well provided with straw houses, and affording fine shelter for cattle, with running water in the yard. His dairy fixtures are very complete. His cow-house contains 36 stalls, with a feed trough in each. The spring-house, with a neat cottage residence over part of it, for the dairyman and his family, is large and conveniently arranged for all the purposes of an extensive dairy." So said a committee of examination on the part of the County Society, two or three years ago; and so said we when we had also "gone the rounds." The "cow-house" spoken of is used, I believe, only while the cows are being milked; it gives each a comfortable place to stand while she disposes of her morning or evening feed, and at the touch of the "milk-maid singing blythe," also dispenses her proper quota toward the next churning. But *milk-maids* belong mostly to an age gone by, and the *singing*, I believe to a millennial epoch that has never yet arrived—nevertheless, I was told that there is nothing of an agricultural or domestic nature, with which the Chester County farmers' wives are not thoroughly cognizant, "from baking a buckwheat cake to milking a dozen cows," and if they do not practice what they understand in the present instance, it surely cannot be for the lack of the most tidy and convenient arrangements possible for the purpose.

And Mr. RAREY, missionary and expounder of kindness to the unruly horse, might here learn that his message of mercy has also been heard among those who care for a more lowly but now and then scarcely less troublesome class—"weak sisters" among the milch kine,—whose im-

patience and spitefulness, so characteristic of their sex when not controlled by due self-restraint, in some cases leads to the regular up-setting of the milk-pail, if not to accidents still more annoying. This excessive activity in the muscles of the posterior limbs, Mr. Pritchett successfully overcomes by strapping up the fore-leg on the side on which the cow is milked, precisely in the Rarey method,—it is found that so long as one leg is thus secured, neither of the remaining three can well be employed for kicking over either the person or the pail.

Among Mr. PRITCHETT's stock we should not forget the Chester County pigs, which are well up in the points of merit laid down by experienced judges.

Messrs. HICKMAN and PRITCHETT accompanied us for a pleasant drive to the scene of the Battle of the Brandywine. The Birmingham Friends' Meeting House, used as a Hospital during that sharply contested engagement, is yet standing; and the memories of the Revolution are imprinted on its flooring, in the blood stains still plainly perceptible, of those who were martyrs in the cause. Our day was concluded by a call upon DAVID WOELPPER, Esq., near Chadd's Ford, who enjoys, like so many others in this region of splendid prospects, a grand perspective of hill and valley from his door. Here a twelve foot water wheel not only furnishes power for the farm machinery, but also pumps water for the dwelling and out-buildings; and the same labor-saving spirit of improvement manifested in the adoption of such apparatus was perceptible in the progressive appearance of all the farm and stock. Under the latter, we should again make mention of the Chester county pigs, one litter of which, eight or nine in number, was spoken of as having averaged 320 lbs. weight each at nine months old.

In returning to West Chester we passed the farm of Mr. J. H. OSBORN, but it was too late to call. Mr. O.'s farm buildings were awarded a premium last year for their excellent arrangement, the committee describing them as "models in every respect," and giving the following particulars in their report:—

The dimensions of the Barn, built in 1848, are 80 feet long by 58 feet wide; of stone to square, with frame front and gables; containing stalls for 7 horses, 5 cows, and 25 feeding stalls, with shedding attached, 35 feet by 58 feet, and 20 feet by 52 feet, with loft above for hay; and one for shelter, 16 feet by 80 feet; barn, shedding and yard covering a square of 115 feet by 110 feet.

Mr. Osborn has all the necessary out-buildings on his farm, such as carriage-house and gear-house, with tool-house overhead; cart-house, with loft overhead for storing farming utensils; double corn-crib, with shelling floor in the centre; ice-house, hog-house, &c., &c., &c.

The Barn and House are both supplied with running water, from a spring-head sufficiently high for this purpose.

Among other points of interest passed by during the day, was the West Town School Farm of 600 acres. It is said to be conducted with a great degree of skill and success.

Under the Dairy Department in this number of the COUNTRY GENTLEMAN, will be found two letters, which I had at first intended to embody in this correspondence, as they were elicited in response to inquiries made, as there explained, in consequence of the belief that more Butter ought to be packed down in Chester County for the winter's use and markets. There is a great prejudice in all that region against anything that is known by the name of *pot-butter*, arising from the fact that it is so often a synonym for all the wretched odds and ends of the years' churnings, put down apparently for the very purpose of obtaining as

disagreeable and rancid a mass as possible. So strong is this prejudice, that Mr. HINMAN justly argued that farmers there could never succeed in packing their butter well and selling it to advantage, until this old name and stigma of *pot-butter* is entirely abolished. The great trouble, he very forcibly insisted, with all who have tried to preserve their butter, has been *an endeavor to keep both the butter and the buttermilk*; and he took every occasion to insist that the latter should be entirely dispensed with, and the former become the sole object of the dairyman.

It will be seen in the letters from Messrs. SHATTUCK and WATTLES, elsewhere published, that they also put great stress upon this point, like all good butter makers. Mr. S. also attaches considerable importance, in obtaining cream in hot weather, to the setting of the milk in *shallow pans*; I noticed especially in several of the Chester county dairies I visited, that the pans used were of a *greater depth* than I have elsewhere seen, and I could not but think this a matter of error, although I was told it had not been found to "make any difference."

The butter in Chester county is very commonly made by contract. The proprietor rents a tenement to a family, who milk the cows and prepare the butter for market, for three cents per pound, having generally included in the bargain, house rent, fire wood, and such other privileges as may be agreed upon between the parties at the time of making the contract. An additional price is also paid the tenant for other labor, such as for feeding and taking care of the cows—sometimes as much as \$200 per annum extra. (Conclusion next month.) L. H. T.

[For the Country Gentleman and Cultivator.]

GROWING AND CURING CORN FODDER.

In the first place, to raise corn fodder, the land should be in good condition, or made so, by manuring sufficiently rich to raise a good crop of corn. It should be thoroughly fitted by plowing and dragging, (and rolling if lumpy) until fine. Then take a light one-horse plow, and put on two horses, and commence on one side of the field, to mark out the ground; making the furrows three inches deep. Set the horse next the furrow, walk in the furrow—each way—that is, in going one way, the off horse takes the furrow, and in returning the near horse follows the furrow. By so doing, the rows are made two feet apart. The draught rod under the plow-beam should be turned so as to throw the beam well towards the off horse, as every other bout forms a ridge—two furrows being turned together—and as the plow is *light* and runs *shallow*, it is liable to shove off, which would make every other row too far apart. In this way the rows can be made straighter and at a more uniform distance apart, than with a single horse—a great advantage in after work.

Now, if you have one of Emery's Seed Sowers, take off the roller, so as to make it light, and set it so as to drop from thirty to forty kernels to the foot, and let it follow and drop the corn in each furrow. Or, in place of a corn dropper, a man with a basket on his arm, can very rapidly scatter the seed in the furrows, but not as evenly as with a dropper. The next thing is to cover the seed. For this, and for other purposes, I have a small drag, made in this way. I got a bar of five-eighths steel, and had drag teeth made 7 inches long, and put these teeth in (eleven in number) between the cultivator teeth to a one-horse cultivator. When used for covering corn, the cultivator teeth and the front drag teeth are taken out, and with a horse to follow the furrow, the work is done very neatly and "at short notice." I suppose the covering might be done with a two horse drag, but not in as "satisfactory manner." The reason why I prefer this way of putting the seed in, instead of using the corn planter to do the *whole* of the work, is this: When the seed is dropped

into the furrow from the dropper or the hand, as it falls it scatters and covers more surface than when put in and covered with the planter; therefore is not as much crowded in its growth; and furthermore, I think the seed is better and more uniformly covered. These advantages I consider more than compensate for the extra labor.

After the corn is up, the ground should be kept clean—weeds are an unprofitably crop—until it shades the ground sufficiently to keep out all intruders. For this purpose, I find the small drag just spoken of the best implement, as it can be worked close to the rows, without covering the corn. Perhaps some more *expensive* implement *would do just as well*. Once working out, if the ground is pretty clear, will generally suffice—at all events, the ground should be kept *clean*. The Western or Southern corn are the best varieties for this purpose, as a much larger amount of fodder can be obtained from an acre than from the common sorts. It should be sown *very thick* to avoid too large a growth of stalk. From a limited experience, however, I think I should like the large variety of sweet corn better than all others, but the seed cannot be obtained at a price that will answer for this purpose—and it does not ripen well here, at least I have had bad luck with it.

And now, if my venerable friend has had patience to follow me through this long introduction, I will most cheerfully, but with great modesty, give him the desired information—"the best method to cure corn fodder." I call it the *best*, because it suits the animals that have it to eat, the best; and, therefore, suits me the best. Others may have a better way, but I have not yet found it.

The corn should be cut up when just fully tasseled out, and laid in gavels of sufficient size to make a small bundle—say eight inches in diameter under the band, when bound. It should be cut when free from wet, by dew or rain. If the weather is fair, and the prospect is that it will be fair to-morrow, it had better lie over night after being cut, and it will become somewhat wilted, and can be more readily bound—the top stalks on the gavels will be sufficiently toughened to use for bands without difficulty. But if there is a prospect of foul weather ahead, it should be bound and stooked at once—it should by no means get wet while lying on the ground. It makes it gritty, and does it material injury. Twelve bundles is the right number for a stook. The stooks should be well and snugly set up, so as to exclude the rain, well braced at the bottom to prevent *blowing* over, and braced *equally alike on all sides*, to prevent *settling* over, as the stalks dry and lose their stiffness. Now, put a strong band around the stook a little *below* the centre, and *draw it tight*; put another band half way from the first band to the top, and then gather up the tops snugly with both hands, and bind them over and put on a band to keep them in that position. This will keep the rain from entering at the top.

The work is now done, and if it has been well done—the stook snugly set up, and strongly and tightly bound, (it requires two men to do this work well) and the lot where the corn was grown is sufficiently near the place of foddering to be convenient, it may stand where it is, until wanted for use, and be all the better for it. But if the lot is at a distance, it would be well, perhaps, for fear of deep snows, or for other reasons, to draw it near to the barn, and re-stook it. By all means let it *remain in the stook*, until wanted for foddering use.

Last fall I had one and a half acres, about sixty rods from the barn, that was stooked upon the ground where it was grown, and it was drawn in, a load at a time, or what I could put upon a wood rack—this would last with other fodder, four or five days—and I find by referring to my farm record, that the last load was drawn in on the 16th day of March, in fine order, and I could not see why it might not have stood until the first of May, without injury. I consider *good bright* corn fodder but little inferior to the best of hay for milch cows—to constitute a *part* of their keeping—it seems to be a change they like very much. Although a few of the butts are not eaten, still I think it a very profitable crop to raise for feeding, green or dry. J. L. R. Jefferson Co., N. Y.

Inquiries and Answers.

VARIOUS INQUIRIES.—Will you be so kind as to answer some questions through your valuable journal *THE CULTIVATOR*? 1. What is the best, most thorough and practical work on the hog, and where to be had and the price? 2. Please tell what you know of the practical utility of Wetherell's horse hoe; its ipree, and if obtainable in the west. 3. When corn is planted in drills, how close should the plants stand in the row? 4. Is there any corn planter as good as Emery's for a less price? 5. Is Emery's planter sold in Ohio, and if so where? *Fairhaven, O.* [Youatt & Martin on the hog, and Richardson on the hog, both good works, are published by C. M. Saxton & Co., of New York, the former for 75 cents, the latter for 25 cents. 2. We have used Wetherell's horse hoe, and find it a very useful implement on light soils, free from stones. On heavy clays it does not succeed well. It should be used when the weeds are not over an inch or two high—it covers them up neatly. L. Wetherell, the inventor and manufacturer, lives at Worcester, Mass. We do not know the price, nor where it can be had at the west. 3. The nearness of corn plants depends on the variety. Plants of the King Philip may be five or six inches apart in the drill on rich land; the common "eight rowed yellow," seven or eight inches, and the larger southern sorts nearly a foot. 4. We know of no corn planter for its price better than Emery's—Billing's is perhaps fully its equal. We do not know that they are sold in Ohio, but there are probably agencies there.]

ROSE SLUGS.—Every year my rose bushes are covered with slugs; they blossom well, but the green leaves are entirely destroyed. Will you in the next number of *THE CULTIVATOR*, please inform me of a sure way of destroying the slugs on my rose bushes, and oblige A READER. *Milford, Conn.* [This is a wide spread evil. Watch the rose bushes, and as soon as the first slugs appear, dash the bushes several times a day with coarse sand or very fine gravel, which will knock the slugs off. Perhaps coal ashes might do well. Air-slacked lime is often used, but disfigures the bushes. Probably water-slacked lime, which is more caustic, if applied just after a heavy dew or a shower of rain, would effectually corrode the integuments of these depredators and kill them; or if the lime dusting were preceded by a watering of the leaves through a watering-pot, the effect would be the same.]

RAISING YOUNG EVERGREENS.—I planted seed of the Norway Spruce, Austrian Pine, Scotch Fir, &c., in May last, in drills, in the same manner as onions and beets are planted, and I find that the Norway Spruce and Austrian Pine are up. Did I plant these seeds properly, and will the young plants, now that they are up, need shading? C. W. WOODBURY. *Henderson Co., Minn.* [The seed of the evergreens named require a fine, rich mould, and should not be planted so deep as onions—the surface of the ground being kept moist artificially if necessary, but not by watering. We cannot say whether the seed were "planted properly," until we know the soil, depth, &c.; but their coming up indicates it, if most of the seeds have vegetated. They will need shading. The Scotch pine usually grows most freely of the three, and we have known it to succeed well without shading, in favorable seasons.]

WILD BUCKWHEAT.—Can you tell me why it is that wild buckwheat springs up on our prairie lands after the second plowing? It certainly is not sown by the hand of man, and it will come up as soon as the ground has been cross-plowed the second year. C. W. W. *Henderson Co., Minn.* [We have never investigated the mode by which the seed of the wild buckwheat are scattered on prairies. The plants of course cannot be produced without seed—any more than calves can be produced without cows. Seed buried beyond a certain depth, away from the reach of light and air, will often remain dormant a long time. They might have been in the soil—or birds might scatter them—or a few scattered, unobserved plants might multiply the seed a thousand fold, and give a heavy crop.]

WATER-RAMS.—I wish some information in regard to raising a spring for my barn yard. The elevation is about 30 or 40 feet perpendicular, and the distance about 20 rods. Can I raise it by a ram? I can get a fall of six or eight feet, and a very good fountain. I want to raise it to the top of the hill, and then conduct it to my stables. Please give me an estimate of the probable cost. By answering the above inquiries or calling on some of your subscribers to do so, you will greatly oblige, JAS. EDGERTON. *Sugar Grove Nursery, Barnesville, Ohio.* [There will be no difficulty in raising the water to the desired height, provided the stream which

drives it is at least large enough to fill an inch bore with a considerable current. Care should be taken to have the driving pipe strong, as the successive strokes will burst it if weak. We cannot give an estimate of the cost, but the cost of ram, pipes, digging ditch, laying, &c., would perhaps be eighty or a hundred dollars. Will some one who has erected rams please give the desired information.]

MANURE FOR GARDENS—POUDRETTE.—What kind of manure is the best to put on the garden? How must I make night-soil into pouquette? How is the best way to apply it—what effect has it? The soil is a sandy loam—it was first made into a garden this year. A. O. V. [Well rotted or old manure, copiously applied, finely broken or harrowed up with the soil, and thoroughly intermixed, will soon make a rich garden. Pouquette is several times richer than common manure. It may be easily made by applying frequently or daily to the vaults of privies, a pound or two of powdered charcoal each, or a larger portion of coal ashes, or well dried loam in powder, or thoroughly dried peat. The whole, on being mixed over a little, will form an inodorous, friable, and valuable manure. The vault should project two feet beyond the privy behind, this portion to be covered with a trap-door, through which the coal ashes, &c., may be thrown in daily, and the new manure shovelled out once or twice a year. A new garden can be made very rich in a single year, by repeatedly plowing, harrowing, subsoiling, &c., adding each time a coat of finely pulverized or broken manure; but large masses thrown on and plowed under without thorough intermixture, will probably do more harm than good.]

INSECTS ON WHEAT.—Enclosed I send you a few wheat heads as a specimen of our bald wheat. The insects on the heads, (if they are not all lost off before you get them,) are new to me and all I have conversed with. I do not see that they have done any damage as yet, but there are enough to eat up a head in a few days, and one head I see has a few of the midge in it. The Mediterranean has but few on, and is so nearly ripe that I do not think it will be damaged much, even if at all. All the difference I can see in the heads, is that the chaff looks black on the grains the insects are on—more so on the Mediterranean than on the White. E. T. C. *Menroe Co., Pa.* [Insects are more easily broken than any other objects sent by mail, hence if merely enclosed in folds of paper, they are sure to be crushed and spoiled, as these were. The fragments remaining indicate that they are a species of aphid or plant-lice—which we have not known to prove destructive to wheat. Small insects may be sent safely in the barrel of a quill, closely stopped at the ends. Larger ones must be sent in phials or boxes.]

DRUM HEADS.—Will you be so good as to tell me through the *CULTIVATOR*, what drum heads are made of, and how they are tanned? A FARMER BOY. *Shelburne, Vt.* [Of vellum or parchment—generally of a heavy parchment made from the skins of asses, calves, wolves or goats. The process is rather a nice and complicated one, consisting in cleansing the skin by means of lime, and by scraping in a state of tension, from hair, fat, flesh, &c., grinding its surface by rubbing with chalk or slaked lime, and pumice stone, paring, polishing, &c. The manufacture could not probably be undertaken with success from reading printed directions.]

WHAT GRASS TO SEED WITH?—I have a piece of meadow land, about eight acres, which I wish to set in grass for hay. The land is very level—has a very stiff clay subsoil similar to potter's clay. Last November I plowed it from eight to nine inches deep, and followed with a subsoil plow at least four inches; early this spring I applied a heavy coat of lime and barn-yard manure, and planted with corn. I now wish to sow it to rye, and set it in grass for mowing, and would like some of your able correspondents to advise me through your valuable paper, as to the kind of grass best suited to such land. There have been several attempts to set it in timothy, but it has invariably failed. Would not the Kentucky Blue Grass answer? If so what quantity per acre should be sown, and at what season? A reply from any of your numerous correspondents will be thankfully received.

Springfield Farm, July 9, 1861.

H. C. WORMAN.

COUNTERFEIT FRUIT.—W. L. Scott of London, stated before the Society of Arts that he had seen in Convent Garden Market, English apples colored superficially to resemble the American Newtown Pippin, and sold as such imported fruit at the rate of 50 cents to 72 cents per doz.—*Ex.* [We should prefer the famed wooden nutmegs, reported to have been formerly sold in this country, or the plaster of Paris cucumbers sold more recently in London, as they would be durable imitations.]



ALBANY N. Y., AUGUST, 1861.

A flying visit last week at Rochester, enabled the writer to inspect some interesting experiments now in progress by JOSEPH HARRIS, Esq., of the Genesee Farmer, with regard to the application of manures; to call upon our other Editorial and Horticultural friends in the City of Nurseries, and, thus and otherwise, to enjoy two days of recreation from the immediate demands of business. The experiments of Mr. H., to which the morning of our Fourth of July was devoted, include the effect of various fertilizers, especially of superphosphate as compared with sulphate of ammonia, both on grain and grass, although it is to the latter that the trials of the present year have more particular reference. It is some years since Mr. H. first instituted the course of experiments in which he is still engaged, bearing upon the expediency of employing purchased manures, and the principles involved in their selection, for the various crops grown by the American farmer; they are conducted on a considerable scale and with great care, and cannot fail to yield interesting and instructive results. We were particularly pleased to see the trials upon the grass-land, from having examined with some attention two years ago, the similar experiments conducted in the park at Rothampstead by J. B. LAWES, Esq., and the published reports of which have since been noticed in our columns. When the test of *accurate weight* has determined the yield of grass upon the several plots treated in Mr. HARRIS' trial-field, we shall refer more in detail to the subject.

At the nurseries of Messrs. A. FROST & Co., ELLWANGER & BARRY, H. E. HOOKER & Co., BISSELL & SALTER, and C. W. SEELEY, we had the pleasure of passing calls, and should have been glad to extend the list had time permitted. One of the most striking points observed was the degree of attention now devoted to the propagation of the grape, in all or nearly all the above establishments. Messrs. FROST & Co. and Mr. SEELEY have very large stocks on hand, the growth of the present and previous years. Messrs. ELLWANGER & BARRY not only propagate the grape to an enormous extent, but have also been conducting experiments for several years past, as our readers are perhaps already aware, in the manufacture of wines both from the grape and currant. The Rochester nurseries—if those we visited or passed by in driving about the suburbs of the city, are to be taken as samples,—certainly deserve the wide reputation they have acquired, if cleanly cultivation and the most thrifty appearances, are a fair index to the possession of peculiar advantages, either afforded by nature, or acquired by long experience and great accuracy and skill.

This brief note should not be closed without the expression of our acknowledgments for the attentions kindly extended us both by the gentlemen whose names have been already mentioned, and by D. D. T. MOORE and JAS. VICK, Esqs., of the Rural New-Yorker, and ISAAC BUTTS, Esq., of the Daily Union. To Mr. B. we owe a delightful drive down the picturesque banks of the Genesee,—which, as well as the previous excursions with Mr. HARRIS out the Buffalo road, and to Irondequoit Bay, carried us by many well cultivated farms, much land devoted to nursery purposes, several extensive orchards young or old, and a great surface under the potato, which root is an important specialty with the farmers of Irondequoit. Their soils are generally light, and seem, like those of Watervliet, near Albany, to be peculiarly adapted for the healthy and profitable culture of this now somewhat fastidious esculent.

We are indebted to WM. THORBURN of this city, for fine samples of the Wilson's Albany Strawberry grown by Mr. Oakley Osborne of Watervliet, and of the Austin Seedling from the Shaker gardens—both good specimens

as respects size and quality of fruit. Also for a basket of Austin Seedling, selected for extraordinary size, to friend CHAUNCEY MILLER—four of which weighed two ounces, and many others were but little short of the same standard. We were pleased to learn that this variety has done much better this year than last, and now apparently promises to equal the anticipations of its friends. Mr. THORBURN, we may add, is agent here for a new kind of basket for marketing small fruits, which is very light, handy and neat, and must be quite durable and cheap.


The Fifth Volume of the "American Herd Book of Short-Horn Cattle," has just been issued from the press of R. Wheeler & Co., Buffalo; and our thanks are due to the author, LEWIS F. ALLEN, Esq., for a copy of it. It contains about 500 pages, and is illustrated with a large number of portraits, mostly drawn on stone by J. R. PAGE, Esq. The paper, printing, and illustrations are superior to those of any previous volume, and highly creditable to all those engaged in its execution. The price is \$5 per vol., or \$5.40 when sent by mail, post-paid, and all orders for it should be addressed to LEWIS F. ALLEN, Black Rock, N. Y., as it will not be for sale at the bookstores. Every breeder of Short-Horns, as well as every public agricultural library, should take care to secure a copy of this work. Mr. Allen says:

Having some surplus copies of the Second, Third and Fourth Volumes on hand, (the First volume being out of print,) I offer them in sets of those three copies at eleven dollars; or, with the addition of the Fifth volume, all taken together, (four books,) fifteen dollars; or either one of volumes Two, Three, or Four, at four dollars each.

DEFECTIVE PLANS OF HOUSES.—It is rarely that any of the various plans we receive, are not more or less defective, unless from the hand of a professed architect, or one who has made the arrangement of the apartments a study for years. Our correspondents will not feel surprised, therefore, if we omit the insertion of some, or point out defects. We have just received one from J. D. W., for criticism. We will mention a few points needing correction:—1st, the partition between the two upper rooms, rests on a portion of the parlor ceiling, without any support below. As a general rule, all the principal partitions above and below, should coincide, to give firmness to the structure. 2. A still more serious error is starting a chimney on the second floor, without even a partition to support it. 3d. The landing of the stairs at one extreme corner of the chamber, instead of near the center, renders a long entry necessary, and occasions many needless steps. 4th. The necessity of passing from the kitchen through the pantry, in order to reach the cellar stairs, is quite an inconvenience. There are some other defects of less formidable character. They could not all be corrected without re-arranging the whole plan—we would refer our correspondent to plans of similar size in various numbers of the Illustrated Annual Register. The cost of such a dwelling, which is 24 by 30 feet, with a height of a story and a half, and a kitchen wing 20 by 24 feet, would be \$800 to \$1,000, if well built, with cellar.

DR. FARLEY'S VINEYARD.—We have spoken on former occasions of this fine vineyard, situated on a peninsula two miles from the village of Union Springs, N. Y. Some of our readers will be glad to learn that it escaped the injury so general throughout the country to the grape, from the severe and unfavorable winter, and that the vines are now making a fine growth and setting fruit. This success is no doubt to be attributed largely to the influence of the water of the lake which surrounds it, in softening the keenness of the winter air.

Mr. GAIL BORDEN, Jr., has an establishment at Wassaic, Dutchess county, for manufacturing "condensed milk" delivered daily to about 3,000 customers in the city of New-York. Mr. B. also puts up a condensed preparation of coffee, containing both the milk and sugar, a teaspoonful of which on being simply dissolved in a cup of hot water, produces as excellent a cup of coffee as the most fastidious would desire. We have received samples through Col. JOHNSON of this city.

 We recently commented at some length upon the assertion, now-a-days quite common, that the average production of American farms—especially of wheat—is greatly diminished from the average of “former times.” In a letter on this subject to the Boston Cultivator, JOHN JOHNSTON says that the crops in Seneca county, for the last two years, have been far above the average for the last forty years. “I have my fortieth crop since I came to this country, now on the ground, and my crop of 1859 was equal to any I ever raised, and I have no doubt that the average of the county exceeded that of any year since I have lived here. Last year we had a fair average crop. This year, I am sorry to say, we shall have, to some extent, a failure, owing to the intense frost early in March, which froze the wheat to death in many places. It was not frozen out, as in ordinary winter killing, but killed with the roots in the ground.” Mr. J. thinks that if Great Britain was now paying a little higher price for the grain she buys of us, the Mark Lane Express would be terrified—not lest we should have none to export—but for fear the immense amount of our exportations should ruin the British farmer.

ANNUAL REGISTER FOR 1862.—The attention of ADVERTISERS is called to the fact that the ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS for 1862, is now in Press. No similar work approaches it in circulation among reading farmers, and all that class who are especially interested in Agricultural and Horticultural Improvement.


The number of pages devoted to advertisements being limited, many applications have each year reached us too late for insertion, and it is on this account, as well as in order that the work may be completed as early as practicable, that those who wish for space in this department should send in their advertisements immediately. Prices as in previous numbers: One page twenty dollars; one-half page, twelve dollars; one-third page, eight dollars; business cards from two to five dollars. Advertisements will be handsomely displayed, according to the room they are expected to occupy.

BRIGHT ON GRAPE CULTURE.—We noticed a year ago at some length, this useful little treatise on what the author terms the “dwarf and renewal system” of culture; on the culture of grapes in pots; and on the management of grape manures. The second edition which now appears, contains many additional pages on manuring and management. Every grape raiser should read this treatise, containing as it does a large amount of practical directions on what may be termed the most artificial and the most thorough mode of raising fine grapes, although the author ostensibly argues with vigor in favor of “imitating nature.” There are some eccentricities of thought exhibited in the work, but we greatly prefer a book that is original enough to be occasionally eccentric in this way, to a dull compilation. This edition contains 150 18 mo. pages, is published by the author, and is sent by mail for fifty cents a copy. [See advertisement.]


PINCHING IN THE BLACKBERRY.—We have elsewhere urged the importance of pinching in the young shoots of the Rochelle blackberry, when about four feet high, and the side shoots when two feet long, in order to render them productive. An old farmer has just informed us, by way of illustration, that when a boy he invariably found those bushes of the wild variety which had been browsed in by the cattle to be full of berries, while the tall or spreading bushes which they had not touched, generally had but a scant crop.


CUTTING TIMBER.—Farmers cut their timber in winter, because they have spare time. To ask them to cut it now would be scarcely listened to a moment, with so much work crowding on every hand. But if you cannot cut it now, it would be better to let it stand till another year. We have now on our fences, rails that were split a few years ago

—those cut late in winter or spring, have become nearly worthless by decay; those cut at mid-summer, have dried thoroughly, and are hard and sound. We prefer paying one-half more to have rails and other timber cut at mid-summer.

 The Mark Lane Express, one week later than the extract quoted in our last, reviews in a leading editorial the prospects of the Wheat crop in Great Britain the present season. Notwithstanding the better weather which for two or three weeks previously had given better hopes to English farmers and reduced the price of grains in Mark Lane, the unfavorable conditions of the past season and of the early part of the present one, are noticed one by one, and the conclusion is arrived at, that neither there nor on the Continent can these conditions fail to have exerted an important effect. “We have conversed” says the editor, “within the last few days, with experienced and intelligent farmers, both English and foreign, and they all agree in representing the wheat crop, whether in France, Belgium, or England, as a weak one—the plant thin on the ground, as not having tillered well; the straw and ear, where the latter has appeared, shorter than in general, and exhibiting less indications than usual of a healthy vigorous growth. This, it is to be feared, will be found to be the case generally, except on the *highly farmed light soils, which, from their being less retentive of the moisture, have maintained a better appearance throughout the season.* It is impossible to give even a guess, much less a reliable estimate, of what the deficiency in the next crop will be, so much depends upon the weather of the next three months; but, *that there will be a greater or less deficiency under any circumstances, there does not appear to be a doubt.* The earing and blooming of the wheat will be watched with the greatest interest, and the subsequent weather will be equally important; for another importation of grain like that of last year, amounting probably to twenty five millions sterling, will be enough to embarrass the financial affairs of the country.”

THE CUT WORM AND CORN GRUB KILLER.—President GEDDES sent some grubs for the examination of Dr. FIRCH, who thus answers his inquiry as to the foe of the cut worm, for the opportunity of publishing which, for the benefit of our readers, we are indebted to Col. JOHNSON. “I doubt not you have noticed in plowed fields a large black beetle with most brilliant golden dots placed in rows on its back. It is the *Calosoma calidum* of Entomologists, and its eggs produce the corn grub killer, of which you send a specimen in the tin box. It is a most inveterate foe of the cut worm, grasping the worm in its strong jaws, and in spite of its violent writhing and struggling, securely holding it, and when it finds these worms in plenty, it gorges and surfeits itself upon them, till it is so glutted and distended, it is scarcely able to stir—for it never knows how to let a cut worm alone when it meets with one. It is continually hunting these worms, feeding on nothing else if it can obtain them. Both it and the golden dotted beetle which produces it, therefore, should never be harmed.”

 A French Professor, M. TISSERANT of Lyons, has recently published a work on Dairy Stock, which is favorably spoken of by the foreign critics. Every traveller on the Continent has witnessed the prevalent custom there of working the cows a-field, as we do oxen; accordingly we find a chapter in Prof. T.'s book devoted to their claims as beasts of burthen, in which he argues that, “if they are allowed sufficient time to feed and ruminate, being worked slowly and for a few hours daily on the farm, they yield much milk and thrive well.”

 The Editor of the Homestead says of the Phoenix Guano, advertised in this paper by Messrs. Williams & Haven of New-London, Ct., that “it seems, from experiment, particularly adapted to give life and vigor to worn-out soils.” He “has used it with marked success on potatoes and turnips.”

Having had occasion to visit Watertown last week, we found the Crops in that part of the State all looking finely, with the single exception of the backwardness of Indian corn. The Hay crop was large, and cutting it was then in progress; the weather was inclined to be showery, rendering the curing of it all somewhat a matter of doubt. Spring wheat, which is largely grown in that region, is making a fine appearance, and oats are also said to be doing well. The feed was never more abundant, and stock are consequently looking their best—a fact, which will doubtless have its influence in very much enlarging the display at the coming State Fair in September. A large show of Horses, especially, is anticipated at that time; Jefferson and St. Lawrence—and indeed all that part of the State—are so extensively engaged in the breeding of the Horse, that under favorable circumstances, as regards weather, etc., we shall look for the finest exhibition in this department the Society has ever seen. As no other department presents greater attractions to the public at large, the effect of this fact upon the attendance will probably be proportionately great. Another very attractive feature will be in the turn-out of Working Cattle; in such a Dairy country, moreover, there should be a large show of Butter and Cheese, and there are enough Improved Cattle, Sheep and Swine in that part of the State to make a creditable exhibition, even if the Eastern, Western and Southern Counties should contribute less than their due share. But we do not anticipate any great lack, even from distant localities; those who attended the last Watertown Fair found the arrangements for shipping stock and articles thither by rail, very convenient and satisfactory we believe, and the officers of the Watertown and Rome and Potsdam and Watertown roads will certainly do all in their power to facilitate the objects of exhibitors. From the opposite direction a good attendance is also expected; many of the breeders and farmers in that part of Canada preferring to cross over to Watertown, rather than go all the way to London to attend their own Provincial Show. The time of holding the State Fair, this year, it will be remembered, is September 17, 18, 19 and 20.

"Another phase of the Agricultural operations of that branch of the Patent Office," writes a correspondent of the COUNTRY GENTLEMAN, dating from Philadelphia, the 13th inst., "is now being acted out. A notice was recently published that the distribution of Cereals was going to commence 1st of July. The Philadelphia Agricultural Society have just received their portion, in the shape of a few muslin bags of wheat imported last year by the Patent Office. This wheat is not only *badly cleaned*, containing quantities of weeds, or something *not* wheat, which no farmer here would be willing to trust on his land without knowing what it is,—but the wheat itself is *musty*, and most likely will never germinate. A friend of mine who recently visited the Patent Office, says he saw there probably *twenty hogsheads* of it, which they were very busy putting up in bags for distribution through the United States' mails. The cost of transportation to the government must be enormous, and as it is worthless the loss is total.

"My friend took one of the quart bags back to Washington to show them, when they denied at first that they had ever sent such, and that it did not come from there. The clerk who put it up was then called, and had to acknowledge it. How much they have already sent out I do not know, but from what my friend represented to them, it is probable no more will be sent out. It was purchased by Mr. CLEMSON, the late Chief of the Agricultural Bureau, last season in Europe."

—This is but a part of the letter referred to, and we may add that we have heard from other quarters similar objections as to the character of the grain recently distributed. We cannot think that the vast importance to the country, has ever been fully appreciated by the authorities at Washington—of having some one in charge of this Seed distribution *thoroughly competent to undertake the task*, who will not convert the post into an agency for the

dissemination of noxious weeds and new insects, among the farmers of the country. We have enough of both, already, as we have proved to our cost; there is no doubt that many of them have been introduced through the carelessness and ignorance of seed importers—an error which we certainly ought not to employ a public agent to commit.

The London *Agricultural Gazette* copies from the COUNTRY GENTLEMAN our account of the Thorndale shipment of Short-horns, and adds a list of the several animals, their purchasers and prices:—

"The 2d Duke of Thorndale has been sold to Messrs. Howard & Robinson for 400 guineas; the 3d Duke of Thorndale has been sold to Mr. MacIntosh for 300 guineas; the 4th Duke of Thorndale has been sold to Mr. Hales for 400 guineas; the Thane of Oxford has been sold to Colonel Pennant for 250 guineas; Imperial Oxford has been sold to Mr. Lawford for 200 guineas; 4th Lady of Oxford has been sold to Mr. McIntosh for 250 guineas. These have thus averaged 300 guineas. Besides these a young bull, Hero of Thorndale, has been sold to Mr. Welch for 200 guineas. These seven animals have thus fetched 2000 guineas, and Mr. Thorne has received the sum he gave to English breeders some years ago for their sires, the two Grand Dukes."

We notice in the report of the Essex Agricultural Society's Meeting at Romford, June 25, that Mr. MacINTOSH there exhibited, but not in competition for prizes, the 3d Duke of Thorndale and 4th Lady of Oxford. The report speaks of them as constituting a feature of no little attraction, and adds that this "American bull is a superb animal, thick, deep, fleshy and symmetrical, and of first rate quality."

During the night of the 22d June, there was a tremendous storm in France, extending through six departments, including hail which cut the crops to pieces, lightning killing men and many domestic animals, and blowing a hurricane which overturned barns and houses, and tore up the trees. This storm is not mentioned in the Mark Lane Express review of the progress of crops, July 1, and the extent of damage done had not been estimated in the Paris Journal of Practical Agriculture of July 5. But the latter paper represents it as so great that subscriptions had already been started for the benefit of the sufferers, headed by governmental appropriations from the Emperor of over eight thousand dollars, divided between the six departments. In England, during the week ending July 1, heavy thunder showers had considerably hindered the making of hay, but on the whole, the week had been regarded favorable:—"Many early-sown pieces of wheat on good soil are likely to be very productive; but the bulk remaining thin, and the breadth this season being diminished, a general abundance is next to impossible, however fine the quality may turn out. All spring corn, with the exception of beans, continue highly promising, and even these are much improved, though the black fly is very prevalent. The root crops have equally advanced. The usual effects of fine weather have appeared in the state of the markets, notwithstanding small supplies of home-growth. New wheat has generally given way from 1s. to 2s. per qr., though farmers in some places with small stocks have resisted the decline; and but for foreign imports, which continue free, there would in all probability have been a rise instead of a fall for the last month. As it is, the week closed with more firmness, and a slight reaction may follow."

We have received samples of the STONE PIPE advertised in another column by D. E. HILL, Middlebury, O. Without having had an opportunity to test them in practice, we can only say that they seem to bear out fully the recommendation of the manufacturer, so far as workmanlike make and substantial appearance go. The prices, it will be seen, are very moderate in view of the quality of the pipe.

From the same maker we have specimens of MILK PANS,

also made of stoneware, and as the process is conducted by machinery, we presume the prices must be comparatively low, although we do not know what they are. The advantages afforded by well made stoneware pans, over those of any other material, are generally acknowledged. The samples referred to may be seen at this office.

✂ In his Notes of a recent tour in Illinois, Mr. HARRIS of the Genesee Farmer tells about one of the large farmers of that State, ISAAC FUNK—who resides near Bloomington; who has 27,000 acres, "all paid for," said to be worth \$800,000—one pasture field of 8,000 acres, enclosed with a plank fence, another of 3,900 acres, and a third of 1,000. His great crop is corn, all of which he consumes at home, and is thus able to market about \$70,000 worth of cattle per year at New-York. His stock on hand of horses, mules, hogs and fat cattle are said to be worth \$100,000. But a Dutch farmer on 1,500 acres of land near Prairie du Chien, Wis., eclipses all competition in the growth of *wheat*—having had no less than *four-fifths* of his land, or 1,200 acres under that crop last year, and the same amount again the present season. Well may any man of English descent in horror exclaim—"Twelve hundred acres of wheat on a fifteen hundred acre farm! Talk of rotation of crops!!!"

WASHING BUTTER.—A correspondent of the Boston Cultivator says he has not had rancid butter in the spring, for thirty years. He washes it. Not with water, which he, with most good butter-makers regards as injurious, but with *sweet* skim milk, salting it afterwards. Have any of our readers tried this way, and with what results? There are some good butter-makers that wash their butter with water, and make a better article than some bad manufacturers who do not wash it. But equal skill, cleanliness and careful management, would doubtless with these good manufacturers make better butter without washing.

TALL RYE—GROUND BONE AS A FERTILIZER.—To-day, July 12th, while visiting at Mrs. R. L. RUDD's house, North Greenwich, Ct., I went out to see her men bind rye, and seeing some straws not cut off, measured them, and found them *six feet seven inches long*, and well filled. Passing the rye field of Mr. OBADIAH PECK of the same neighborhood, still uncut, I went into one side, not more than ten feet; and seeing from the top of the fence that it looked about alike over the entire field, I selected two straws—the longest one *seven feet one inch*; and I presume I might have obtained those still longer. The entire crop far exceeds anything that I have ever seen. The heads are well filled, and to appearance, I should judge the yield would exceed forty bushels of grain per acre. The seed was sowed, if I remember correctly, early in September; and one hundred bushels of ground bone was sowed broad cast on the field of about six acres. Ground bone not only tends to produce large straw, but furnishes a large amount of grain producing material. S. E. TODD.

✂ We learn that JOHN T. ANDREW, Esq., the well-known breeder, has removed from West Cornwall to Cornwall, Conn., where his correspondents will hereafter address him. [See his advertisement on another page of this paper.]

✂ We learn that Rev. J. KNOX of "Coal Hill," near Pittsburgh, has done a large business the present season in marketing strawberries in the city of New York—after an eighteen hour railway journey. It is stated that he has now 50 acres under this one fruit; his "two principal varieties are Wilson's Albany Seedling, and Triomphe de Gand, both of which are of such firm texture that they bear transportation, and are so productive that 400 bushels an acre is not a large estimate of their yield."

✂ Our thanks are due to our friend C. S. MACK of Lockport, for a sample of the fine cheese sent forth from his dairy. It is rich and delicious, melting in the mouth like butter.

✂ The Eighth Annual Fair of the California State Ag. Society has been appointed at Sacramento, Sept. 16—21—President, JEROME C. DAVIS of Yolo; Secretaries, O. C. WHEELER and N. A. H. BALL, Sacramento. The citizens of Washington and Utah Territories, as well as the State of Oregon, are cordially invited to participate in the exercises of the Fair, on the same conditions with the citizens of the State.

✂ We are indebted to Mr. Secretary KLIPPART for the "Premiums and Regulations of the Twelfth Annual Fair of the Ohio State Board of Agriculture," to be held at Dayton, Sept. 10—13. Competition open to other states.

✂ The next Exhibition of the Rensselaer Co. Ag. & Mechanical Association is to take place on their grounds between Troy and Lansingburgh, Sept. 2—6. The Premium List is a liberal one, and published in excellent style. President, Hon. J. C. OSGOOD—Secretary, Col. W. T. WILLARD.

✂ The St. Lawrence County Agricultural Society will hold its Tenth Annual Fair upon the Society's Grounds at Canton, on Wednesday, Thursday and Friday, the 25th, 26th and 27th of September, 1861. We are indebted to the active Secretary, L. E. B. WINSLOW, Esq., for a copy of the Premium List, which appears to be as liberal as usual.

✂ The Ulster Co. Ag. Society is to hold its next Fair at Kingston, Sept. 25—27—President P. H. BRINK. Address by Col. C. L. KIERSTED.

✂ The Twenty-first Annual Fair of the Saratoga Co. Ag. Society is to be held at Saratoga Springs, Sept. 3—6—President, JOS. BAUCUS; Secretary, JOHN A. COREY.

✂ The Sixteenth Annual Fair of the Rutland Co., Vt., Ag. Society is to be held at Rutland, Oct. 2, 3—President, A. H. POST, Rutland; Secretary, HENRY CLARK, Poultney.

✂ The Union Ag. Society, Falls Village, Conn., holds its Annual Show at that place. The local paper devotes about six columns to the Premium List and Regulations, *without mentioning, as we can find, the date on which the Fair is to take place.*

✂ The Fairfield Co., Conn., Ag. Society's next Fair, takes place at Bridgeport, Sept. 17—20—President B. B. PLUMB, Trumbull—Secretary, EDWIN HOYT, New-Canaan.

✂ The Madison Co., Ill., Ag. Society, has its next Show at Edwardsville, Oct. 1—4, competition open to the State. President, DANIEL P. GILLHAM of Alton.

✂ The Eleventh Annual Fair of the Racine Co., Wisc., Ag. Society takes place Sept. 17—19 at Union Grove—President, Hon. J. I. CASE; Secretary, GUSTAVUS GOODRICH.

TIME OF MARES CARRYING COLTS.—W. H. Ladd states in Field Notes, that from records kept the last thirteen years, he finds that the most usual period of pregnancy with mares is eleven months and a half. As mares get older the time is increased as a general rule, a few days each year.

ADVANTAGES OF THE SMALL FRUIT CROP.—Throughout a large part of the country, trees of plums, pears, cherries, &c., will afford but a small crop. Cultivators should not be discouraged at this result; the trees are often injured by the heavy loads which they bear, and make but little growth. Give them good culture and attention; place them in a vigorous condition; do not neglect them because they do not pay heavy dividends this year, and they may afford valuable returns the next.

SOILING CATTLE.—The Germantown Telegraph remarks that "in the vicinity of Philadelphia, where the demand for milk and cream is so extensive, soiling is pursued to a greater or less degree, by every dairyman who thoroughly understands his business. Nevertheless it is conducted in very few instances with that systematic detail and accuracy, which have so important a bearing in bringing out the full evidences of its success."

HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



THE ILLINOIS CENTRAL RAILROAD CO., HAVE FOR SALE
1,200,000 ACRES OF RICH FARMING LANDS,
 In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

LANDS OF ILLINOIS.

No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois. There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, CORN and WHEAT, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over \$100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses; the TAXES ARE LIGHT, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only \$10,106,298 14, and within the last three years has been reduced \$2,959,746 80, and we may reasonably expect that in ten years it will become extinct.

PRESENT POPULATION.

The State is rapidly filling up with population; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

AGRICULTURAL PRODUCTS.

The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

FERTILITY OF THE SOIL.

Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 the Company have sold 1,300,000 acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of \$30,000,000. In 1850 the population of forty-nine counties, through which it passes, was only 335,598 since which 479,293 have been added; making the whole population 814,891, a gain of 143 per cent.

EVIDENCES OF PROSPERITY.

As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from \$6 to \$25 per acre, according to location, quality, &c. First class farming lands sell for about \$10 to \$12 per acre; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars.

MOHAWK RIVER UPLAND FARM FOR SALE.

The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing; the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for a CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

JOHN M. VANDEVEER.

June 27—w&mtf.

Amsterdam, N. Y.

R A R E C H A N C E. The undersigned now offers for sale his SPLENDID SUBURBAN RESIDENCE & FRUIT FARM.

LOCATED NEAR

Hudson, Columbia Co., N. Y.

This farm, containing 20 acres, together with the buildings, is situated on an eminence commanding a very extensive view of the city, river and surrounding country. Within three quarters of a mile of all the landings, railroad depots, and business parts of the city,—the grounds are all tastefully laid out and decorated with a great variety of flowering plants, trees, shrubs, vines, and varieties of evergreens, deciduous trees, screens, hedges, &c., &c. The farm is in a high state of cultivation by thorough draining, trenching and manuring. The buildings are all new, handsome, thoroughly built, convenient and ample. The garden and orchard is extensive, containing all the best varieties of apples, pears, cherries, plums, peaches, grapes, and quinces. Also Raspberries, blackberries, strawberries, currants, gooseberries, &c. Nearly 1,000 dwarf pear trees set in soil trenched two feet in depth, and trained pyramidically, are now bearing. The location is eminently adapted to the cultivation of the grape, as a large collection of the best varieties, producing splendid fruit, will testify. The farm is well adapted (as was designed) for raising fruit for the New-York market, and the fine specimens sent to market and on exhibition prove the truth of the assertion. Improvements too numerous to mention in an advertisement, together with the locality, render it one of the cheapest and most desirable places to be found on the Hudson between New-York and Albany. Price \$10,000. Terms of payment made easy.

REFERENCES.—John Stanton Gould, Josiah W. Fairfield, Charles P. Waldron, Charles F. King, Captain Steamer Oregon, Hudson, or of the subscriber on the premises.

SOLOMON V. GIFFORD.

June 6—w13tm3t.

COE'S SUPERPHOSPHATE OF LIME.— The subscriber has the above article genuine, and is prepared to furnish it in bags of 125 pounds, or by the ton from one to ten. Terms made known on application.

Circulars sent gratis. WM. THORBURN, Seedsman,
June 20—w&mtf. 490 & 492 Broadway, Albany.

S H O R T - H O R N S AND BERKSHIRE SWINE. FOR SALE.

A few COWS and HEIFERS, one aged BULL, and three or four BULL CALVES.
A yearling BOAR HOG, several SOWS and PAIRS OF PIGS two months old.

Prices in keeping with the times, and delivered in New-York, on rail car or ship board, free of charge.

Apply to L. G. MORRIS,
Herdsdale Farms, Scarsdale, P. O., Westchester Co., N. Y.
July 4—w&mtf.

BRIGHT ON GRAPE CULTURE.— SECOND EDITION.

THIRTY PAGES OF NEW MATTER,

with the experience of 1860 and '61, being the most important part of the work. Indispensable to all GRAPE GROWERS. Sent by mail, free of postage, on receipt of the price, 50 cents, in stamps. Address

WILLIAM BRIGHT, Box 138 Philadelphia P. O., Pa.
July 4—w&mtf.

FIRST PREMIUM

AWARDED BY THE

N. Y. STATE AGRICULTURAL SOCIETY,
At Elmira, October, 1860,

TO HARDER'S HORSE POWER.

THE subscribers Manufacture, at Cobleskill, N. Y.,
ENDLESS CHAIN HORSE POWERS,
COMBINED THRESHERS AND CLEANERS,
THRESHERS AND SEPARATORS.

These Powers operate with greater ease to the team than others, running with very low elevation, and slow travel of the horses. The Combined Thresher and Cleaner runs very easy, is capacious, separates the grain cleanly from the straw, and cleans as well as a regular fanning mill. In short, THESE MACHINES HAVE NO EQUAL, of which fact we are confident we can satisfy all who will consult their own interest by addressing

R. & M. HARDER,
Cobleskill, Schoharie Co., N. Y.

July 1—m3t.

CHESTER COUNTY PIGS.— AN EXTRA GOOD LOT

Of Chester Pigs, properly paired, for sale by J. R. PAGE,
July 4—w4tm3t. Sennett, N. Y.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address,
Jan. 10—w&mtf. PENNINGTONVILLE, Chester Co., Pa.

LANDSCAPE GARDENING AND RURAL ARCHITECTURE—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

GEO. E. WOODWARD,

Architect, Civil Engineer & Draughtsman,
No. 29 BROADWAY, NEW-YORK.

Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter. March 21—w&mtf.

FOWLER & WELLS' JOURNALS.—

ENLARGED AND IMPROVED—PRICE NOT INCREASED.

Postmasters, Clergymen, Teachers, and others, are requested to act as Agents, and get Clubs for our Journals.

THE ILLUSTRATED AMERICAN
PHRENOLOGICAL JOURNAL,
AND LIFE ILLUSTRATED.

WATER-CURE JOURNAL,
A GUIDE TO HEALTH.

These Journals commence new volumes with July, and have been enlarged, giving now in each

24 Pages Monthly, instead of 16.

TERMS IN ADVANCE:

Single copy, monthly, one year,..... \$1.00
Ten copies, to separate addresses, if desired,..... 5.00

Any person sending Five Dollars for ten copies, will be entitled to AN EXTRA COPY GRATIS. Add six cents a year for each subscriber in the British Provinces, to pay postage. Specimens sent free.

FOWLER & WELLS, 308 Broadway, New-York.
Agents wanted everywhere to sell our publications. Send for our Wholesale List and Confidential Circular. July 11—w3tm1t.

S T E E L — P L O W S.

We are now manufacturing a superior Steel Plow, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use:

John Johnston, Geneva, N. Y.; Wm. Sumner, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Sumner, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slaughter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel... \$15.00

do. do. with cast point..... 14.00

"Empire," No. 1, with cast point, full trimmed..... 15.00

For Three-Horse Plows..... \$1.50 extra.

For Adjustable Beams..... 1.00 do.

We also manufacture Sayre & Kliuk's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become loose in the frame, like the former, nor to break, like the latter. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

SEND FOR A CIRCULAR.

REMINGTONS, MARKHAM & CO.,

Ilion, Herkimer Co., N. Y.

E. REMINGTON & SONS, BENJAMIN P. MARKHAM, GEO. TUCKERMAN.

March 21—w&mtf.

JOHN T. ANDREW, CORNWALL, CT., FACTOR IN IMPROVED STOCK.

Breeder of DEVON CATTLE, NEW-OXFORDSHIRE SHEEP, &c.
March 21—wlyr.

CHESTER COUNTY PIGS.

The undersigned continues to execute orders as heretofore for his pure stock of the above celebrated breed, which will be carefully shipped to any point of the Union, in pairs not akin.

The selections are made only from pure bloods, and chiefly from premium animals which have been uniformly successful at our local fairs. He refers to purchasers from him in all sections of the Union. PASCHALL MORRIS, Agricultural and Seed Warehouse,
Feb. 14—wtf. 1120 Market-street, Philadelphia.

THE BEST OF STOCK—IMPORTED

SILESIAN SHEEP and their descendants—Morgan and Mes senger Horse Stock, of as good blood as can be found in the United States; and Suffolk Pigs. Address WM. H. LADD, Richmond, Jefferson Co., O.
Feb. 14—wly.

THE ILLUSTRATED 1862. ANNUAL 1862. REGISTER OF RURAL AFFAIRS.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now nearly ready for the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partial abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

One Hundred and Sixty Engravings.

The ANNUAL REGISTER for 1862 will be ready early in September, and we are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as it is issued. The attention of OFFICERS of AGRICULTURAL SOCIETIES, and others who propose attending Town, County or State Fairs this Fall, is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions throughout Autumn and Winter. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

TO ADVERTISERS.

TWENTY PAGES only will be devoted, as in the previous issues, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last year some of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements IMMEDIATELY. Notwithstanding increased circulation, prices remain for 1862 as heretofore:

One Page.....	\$20.00
One-Half Page.....	12.00
One-Third Page.....	8.00
Cards, &c.....	\$3.00 to 5.00

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.

1. General Considerations.
2. Estimating the Capacity of Barns.
3. Form of Farm Buildings.
4. How to Plan a Barn.
5. Barn Basements.
6. Cost of Barns.
7. Design One—Barn for Fifty Acres or Less.
8. Design Two—Barn for Seventy-Five to a Hundred Acres.
9. Tool Rooms and Details in Stable Construction.
10. Design Three—A Large Three-Story Barn.
11. Design Four—A Small Three-Story Barn.
12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.

1. The First Formation of the Embryo.
2. The Seed and the Requirements for its Germination.
3. Process of Germinating in Plants having One and Two Seed Leaves.
4. Mode of Growth and Structure of the Plant or Tree.
5. The Root—Layering; Cuttings; Transplanting.
6. The Stem and Branches.
7. The Buds and Leaves.
8. The Process of Growing.
9. Principles of Grafting and Budding.
10. Flowers—their Organs; the Crossing of Different Varieties.
11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.

1. Importance of the Grass Crop.
2. Descriptions of the more Common Species.
3. Nutritive Value of Hay.
4. Management of Grass Land.
5. Suggestions in Hay-Making.

*. This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.

1. Essential and Non-Essential Points in their Erection.
2. Materials and Connections.
3. Length, Height and Supports—Stiffeners above the Roof.
4. Entering the Earth.
5. The Copper Rod—Various Errors—Cost of Rods.

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4. Directions for Two or Three Story Buildings.
5. Siding, Lining and Construction of Partitions.
6. Framing Large Barns.

VI. MOVABLE-COMB BEE-HIVES—EIGHT ENGRAVINGS.

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XII. RURAL AND DOMESTIC ECONOMY, &c., &c.

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12. Quality of Different kinds of Wood.
13. Gestation of Animals.
14. Quantity of Garden Seeds Required for a Given Area.

XIV. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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